

BUSINESS WEEK

WEEK
AGO

YEAR
AGO

START
OF WAR
1939

HOW TO SHOP WITH WAR RATION BOOK TWO
... to Buy Canned, Bottled and Frozen Fruits and Vegetables;
Dried Fruits, Juices and all Canned Soups

1. USE THIS RATION BOOK. You must use one on all of your purchases of canned fruits, bottled fruits, frozen fruits, dried fruits, juices and all canned soups.
2. USE STAMPS ONLY. All these point stamps can be used to buy a new stamp during the first ration period. They add up to 10 points for each member of the family.
3. THE MAXIMUM STAMP POINTS. You can use the stamps to get a maximum of 10 points worth of goods. If you have more stamps, you must use them before you buy more goods.
4. LOOK AT THE POINT VALUES. The points value of each item is shown on the back of the ration book. Buy items with the lowest point value first.
5. CEILING PRICES. The government has set a maximum price for each item. You must pay no more than this price.
6. POINTS PER UNIT. The points value of each item is shown on the back of the ration book. Buy items with the lowest point value first.

YOUR POINT ALLOWANCE MUST LAST FOR THE FULL RATION PERIOD
Plan How Many Points You Will Use Each Time Before You Shop

BUY EARLY IN THE WEEK **BUY EARLY IN THE DAY**

OPA instructions on point rationing — more problems for consumers and grocers.

BUSINESS
WEEK
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15 CENTS

How are you going to face the man with the empty khaki sleeve?

SOMEDAY the tragic troops will come back—arms, eyes, legs gone. Many would have been whole men, many others would be live men, if enough planes, tanks, guns had been there, in time.

Those cripples will be around all the rest of your life to remind you (*they'll never let you forget*) that you went hunting the day you could have produced enough to save that arm . . . you slowed down your work at the cost of that man's eyes . . . you didn't convert your plant in time to save that man's leg . . . you kept your eye on your political job instead of the war—and threw away a hundred lives.

Aren't your few extra dollars, your political power, your so-called "rights" going to seem pretty unimportant when you look into the eyes of a cripple and know that you made him one? Then let's get on full speed with our job of winning the war, thinking of *nothing else*, and so make the casualties as few as possible.



YOU CAN TURN IT BETTER, FASTER, FOR LESS . . .
WITH A WARNER & SWASEY





Pipe the easy way to shovel coal

A typical example of B. F. Goodrich improvement in rubber

POWER plants gobble coal by the carload. In many modern plants the coal is pulverized, and blown into the fire box through steel pipes.

But to connect the pipes to burners it was often necessary to make S-shaped bends that are difficult and expensive to install. And the moment they're in, the hard sharp particles of pulverized coal start to bombard the bends. In a few months they're worn through, and the expensive pipe bending and installation has to start all over again.

The engineers of a Pennsylvania

power plant wondered if rubber hose would stand the service. They had heard of a special B. F. Goodrich rubber developed for a chute lining to stand the grinding of gravel and sand. Unlike rigid steel which must stand and take it—and so wear out—this rubber is soft enough to give under the beating it gets. And of course flexible rubber would be easy to install—it could follow the turns and twists between coal bin and furnace with no expensive forming.

Hose of this special B. F. Goodrich rubber was made and put into the

power plant. Installation cost was far less, and the hose lasted not the eight months that the steel stood up—but two years.

The same research that produced this rubber is continuing today even under war-time restrictions, bringing to light improvements that will mean better rubber and synthetic products for industrial peace. *The B. F. Goodrich Co., Industrial Products Division, Akron, Ohio.*



B. F. Goodrich

RUBBER and SYNTHETIC products

**"Biggest bargain
my paper
ever printed!"**



Oh, there'll be some who groan about their wartime taxes. But not so many. Most Americans have a good idea what they're getting for their money.

Talk about your bargains! For his dollars a man gets the "American Way" insured for keeps; builds an impregnable defense around his sacred Bill of Rights; keeps democracy with a small "d" a-rolling and a-spreading.

Let little men worry as their taxes mount. The rest of us are glad; for we know it's a sign—a dollar sign—of action against the Axis. To **SKF** workers tax-paying is a privilege today, as great as turning out anti-friction bearings for the U. S. war machine.

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WASHINGTON BULLETIN

WHAT THE WASHINGTON NEWS MEANS TO MANAGEMENT

New Boss, Changed Plan

To industry, the immediately important aspect of Ferdinand Eberstadt's ouster as vice-chairman of the War Production Board is its impact on the Controlled Materials Plan. CMP will not be thrown out the window. But it unquestionably will come up for a drastic overhauling.

The mere fact that Eberstadt, protagonist of the plan, will be absent at the time of CMP's first test points to modification; the fact that Charles E. Wilson, the new boss, doubts that the plan in its present form can be made to work, guarantees modification.

Two Strong Men

It wasn't Controlled Materials Plan disputes, however, that forced the Eberstadt-Wilson battle steadily toward its climax of this week. Difference in personality must be given its weight here. True, there were important divergencies of policy, of method (BW—Feb. 13 '43, p15). However, they need not have proved irreconcilable if the ability of the two men to work together had not been handicapped by their difference in background—for Eberstadt, finance; for Wilson, industrial production—and by their likeness in uncompromising determination.

Nelson-Byrnes Tangle

Eberstadt's removal is being interpreted as a phase of the "military-civilian" fight. But what actually precipitated the unprecedentedly frank ouster was that he got himself tangled in an entirely different jurisdictional issue—between Donald Nelson and Stabilizer James Byrnes.

Last week, when Nelson transferred a half dozen industry divisions from Eberstadt to Wilson, Eberstadt appealed, through intermediaries, to Justice Byrnes. He didn't get anywhere, but Nelson found out about it.

Nelson is acutely sensitive to Byrnes's assumption of authority as "Domestic President." He is determined to the point of resignation that no intervening authority—Byrnes or anyone else—shall be interposed between him and President Roosevelt. Eberstadt's appeal finished him with his chief in WPB.

Heat on Materials

Wilson's new top position will alter the direction of development for many WPB policies. The material-producing

industries will feel some of the first effects of these changes.

Eberstadt's approach to production planning was to start with a given quantity of materials, cut the programs to fit. This was a needed corrective to the Army method of assuming that anything the soldiers wanted could be built, but it did take most of the heat off the material producers. Wilson, on the other hand, is convinced that material output can be stepped up substantially. **• Labor Will Speak Up**—Labor spokesmen will get a hearing for their recurrent charges that copper producers, for instance, still follow the peacetime practice of working their worst ores when business is good so as to be able to compete when business falls off; that lumbermen are cutting their poorest rather than their best land; that blast furnaces are being run at rates that are over-conservative.

Wilson's Tough Spot

As to the Controlled Materials Plan, Wilson is in a tough spot. He sees as clearly as anyone that it has gone too far to be scrapped, that CMP's removal would create infinitely more confusion than its existence, would leave industry with no comprehensive material-control system.

In this situation, you should expect moves to ease, and probably slow, the transition from the Production Requirements Plan to CMP. Many firms are not yet under CMP. Many more are nominally under but actually quite unprepared to deal with it. Such firms either will be provided with some short-cut way to get the benefits of an allotment number or will have their PRP allocations strengthened.

• Class B Out?—Under consideration is a more drastic step—removal of the Class B products from CMP treatment altogether. These are the standard goods—commercial items and components entering into a variety of military goods. It is these items that have caused the bulk of the confusion in applying CMP.

Plan is to put manufacture of such goods back under PRP—a step for which many of the manufacturers have been pleading. Then the vertical manufacturer-to-supplier-to-subsupplier control, which is admittedly needed even in Class B goods, would be provided by insistence on tight production scheduling. But the scheduling would be done alongside, rather than as a (theoretically) integral part of, the material-control system.

The Class A products—special-design military goods—will undoubtedly continue for some time to come under substantially the present CMP rules.

First Step

Even before Eberstadt went, an important but little-noticed step had been taken to smooth the transition from the Production Requirements Plan to the Controlled Materials Plan. WPB has started assigning allotment numbers out of hand to every Class B producer who submits a CMP-4B application form. The allotment covers 30% of what he asks for, will be supplemented later when his application receives formal processing.

This has two effects: It safeguards industry against WPB delay in issuing allotments, and it makes it easy for firms that missed the Feb. 8 deadline on CMP-4B's to get under CMP anyway.

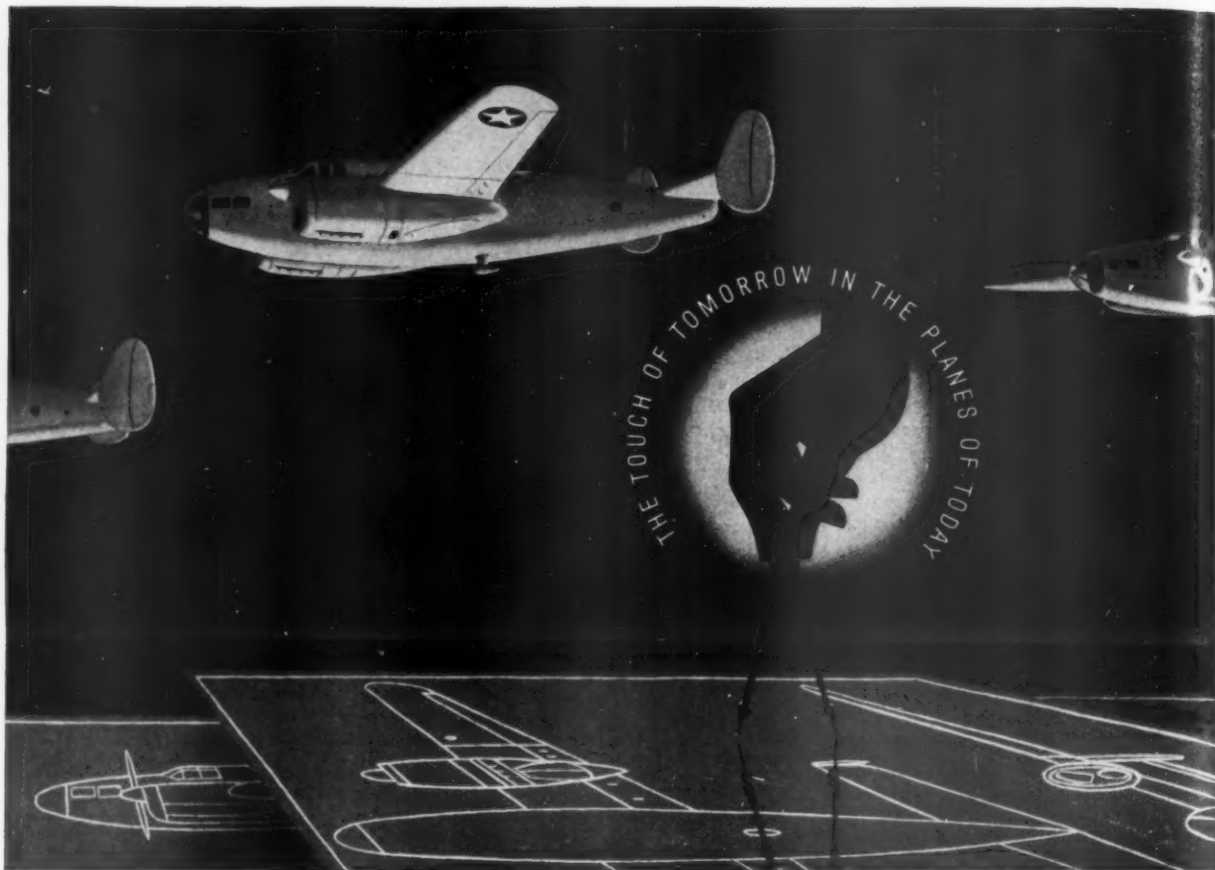
Salary Limit Compromise

President Roosevelt did not have a sympathetic audience when he offered to rescind his \$25,000 salary limitation order if Congress would enact a special supertax, putting substantially the same ceiling on income of all kinds. The House Ways and Means Committee already has voted 15 to 10 in favor of Rep. Wesley Disney's compromise which would scrap the flat limit but freeze incomes over \$25,000 at prewar levels. Feeling in the Senate is even stronger.

• For Trading Purposes—As congressmen see it, the President's suggestion is no offer at all. It's a maneuver designed to put him in a better bargaining position and, at the same time, save his dignity if Congress jams through what amounts to outright repeal of the order. Odds are the scrap will end in a compromise of some sort, but if Congress stays in its present mood, there isn't much chance that it will adopt any general income limit.

Treasury Holds the Veto

Employers who increase their work-week to 48 hours, in line with the President's executive order, must obtain permission from the Bureau of Internal Revenue before increasing the pay of salaried employees who are not covered by the wage-hour law, to compensate such employees for the extra hours worked. This holds with respect to employers located either inside or outside the 32 labor shortage areas so far designated (page 14) and is a reversal by



From Plans to Planes at Wartime Speed

Victory won't wait. It needs planes and engines at wartime speed. Day by day, Fairchild planes and engines are being produced 'just a little faster.'

When war broke out, Fairchild called in scores of sub-contractors in order to compress a month's ordinary production of parts into a day. It scoured one town for manufacturing space down to the last garage and filling station. The Army-Navy "E" flies over this Division today.

Production shortcuts clip minutes from hours . . . and put planes and engines into pilot hands just that much sooner. No time to wait for a stretching die made of steel. Fairchild makes it of wood, saving much time, much steel. A quick-change device cuts down the time usually required to re-tool a

precision machine . . . and a highly skilled mechanic is freed to join the production battle at another spot. A machine is built that cuts down milling time on one part by 500 per cent. Still another machine is built which does in 20 minutes work usually requiring many hours.

And so it goes—a minute clipped here, an hour there. Time-saving ideas from Fairchild employees have helped put more than one additional pilot over Rabaul, Tunis, Hamburg.

Faster and faster roll the planes and engines from Fairchild production lines. They must roll still faster . . . and they shall. For production, as well as performance, is behind "the touch of tomorrow in the planes of today."

"ON THE BEAM"

"Breathes there a man with soul so dead
who never to himself hath said: 'This is
my own, my native land.'" Isn't your
country worth 10% of your pay check in-
vested in War Bonds?



ENGINE AND AIRPLANE CORPORATION
30 ROCKEFELLER PLAZA, NEW YORK

Ranger Aircraft Engines Division, Farmingdale, L. I.

Duramold Division, New York, N. Y.

Fairchild Aircraft Division, Hagerstown, Md.

bureau officials of their first impression of the order and of Economic Stabilization Director James F. Byrnes's speech (BW—Feb. 13'43, p. 5).

In the case of employees subject to the jurisdiction of the National War Labor Board, NWLB's approval is required only for paying time and a half to employees who are not covered by the wage-hour law or by a contract requiring payment of time and a half, or

where payment of time and a half for overtime has not been customary practice. Payment of straight time for overtime in such cases does not require clearance by NWLB.

• **Ceiling on Increases**—Approval of salary increases will be practically automatic except where salaries are so high that they are regarded as payment for the job rather than for the number of hours worked.

Formula Trouble

Labor members of the National War Labor Board have no intention of supporting the determination of Economic Stabilization Director James F. Byrnes to hold wage increases to the "Little Steel" formula—15% above January, 1941, rates to compensate for living-cost increases up to May, 1942. They voted against the decision in the meat-packers'

Congress, Led by Farm Bloc, Takes the Offensive

The congressional farm bloc and the farm organizations are saddling up again in their drive for price inflation. In riding this horse they don't propose, however, to get caught with the blame for food shortages that will show up later in the year.

Because they might lay themselves open to this charge by denying to Secretary Wickard the \$100,000,000 he wants in incentive payments for boosting production of "war crops," the House Appropriations Subcommittee on Agriculture seems likely to reverse the stand against this "subsidy" that it took this week. The farm bloc would like to eliminate government checks to farmers so as to get rid of government controls over production—and concentrate on high prices to stimulate output—but farm bloc leaders are confident now that Wickard's "incentive" subsidy will not interfere with their price-boosting plans.

• **Lifting the Ceilings**—In return for accepting the incentive payment plan, the farm boys are demanding a quid pro quo which gets them what they really want. First off, they want the Bankhead bill forbidding the deduction of benefit payments in setting price ceilings. So complete is the Administration's surrender, that the bill may not even have to be passed; the objective may be achieved by Executive Order. The Administration is resigned to taking the ceiling off corn, and the next step would be to boost the flour ceiling which holds wheat below parity. These are the only important ceiling prices arrived at by deducting benefit payments from parity.

• **Boosting Parity**—The other big farm bloc objective is the Pace bill to boost parity 15% by including farm wage costs. The Administration is trying to work a compromise on this one. Byrnes is proposing a formula that would add labor costs

to parity. The effect of the Byrnes proposal would be about the same for cotton, sugar, and dairy products but would raise the parity value.

The farm organizations have no notion of knocking Byrnes, Wickard, or OPA Administrator Brown out of their jobs. That would leave the farmers in the position of having to accept responsibility for the nomination of new administrators and for the food shortage which they fear is inevitable.

• **Features of the Show**—Here's what they have in store for Byrnes, Wickard, and Brown:

(1) The Senate agriculture subcommittee over-all food investigation. Sen. Cotton "Ed" Smith is running this show. There is not a real friend of the Administration on his committee.

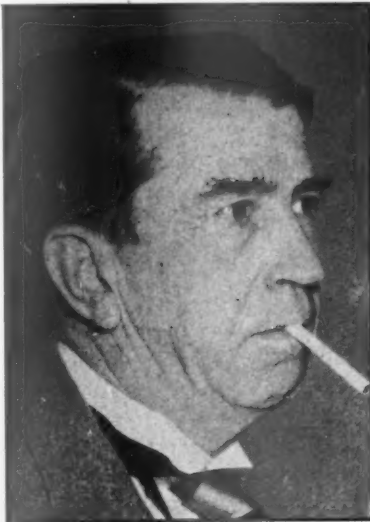
(2) The House appropriations subcommittee investigation of all government-owned corporations—aimed at the Commodity Credit Corp.—and of the use of their funds for subsidy purposes. The Byrd Joint Government Economy Committee is attacking from another angle. It will

investigate Wickard's new regional agricultural credit organizations set up to provide extra easy credit for war crop loans.

(3) Sen. Reed's resolution asking for an investigation of OPA price ceilings on meat and bakery products—the opening gun in a fight for a one-cent rise in bread prices. Administration men are fighting desperately to refer this resolution to the Banking and Currency Committee rather than the Agriculture Committee. OPA is already under fire from the dairy farmers, who went over Prentiss Brown's head to protest its fluid milk price ceilings on producers.

(4) A running-fire attack on OPA. This is implicit in the House approval of the Smith resolution (by a vote of 294 to 50) which sets up a committee to hear any citizen's complaint against any government bureau rule, regulation, order, or procedure. The resolution was sponsored by Rep. Smith (left), who is no relative of "Cotton Ed" but is a Virginia Democrat who has been gunning for the Administration for several years.

• **Congress in Fighting Mood**—The farm bloc's campaign is only one phase of a down-the-line congressional onslaught against the Administration. Rep. Smith's committee is the spearhead of a score of investigations being launched on Capitol Hill. Hostile temper of Congress against Administration "bureaucrats" is revealed in the house vote denying the postal frank to executive agencies. At mid-week, Speaker Rayburn had not decided on the membership of the Smith committee. If he appoints energetic men, this committee will become the focal point for congressional discontent. The committee is empowered to probe into every action of the executive agencies, especially WPB, OPA, and the other war agencies.





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 READING, PA. U.S.A.

WASHINGTON BULLETIN (Continued)

case denying an increase beyond the limits of the formula (page 87).

On the other hand, they do not support John L. Lewis's \$2-a-day dream (page 92). They're plumping for a modification of the formula to cover all rises in the cost of living, not just those prior to last May.

• **What They Want**—Their dissenting opinion in the meat-packers' case said they would be satisfied to go 5% to 6% beyond the formula and stop—if the cost of living could also be brought to a standstill.

Contract Cancellation Studied

Although contract renegotiation is still the item of principal concern (page 19), it is not too soon to think about contract cancellation. Mindful of the day when contracts must be cut off, Army-Navy procurement officials recognize the desirability of a uniform contract cancellation clause if agreement can be reached on a draft. Nothing definite is likely to materialize for several weeks at least, as the service lawyers are still battling it around. These are the principal factors under discussion: payment for finished items delivered to date of cancellation; payment of costs incurred on work in process plus a percentage of profit that undoubtedly will vary; costs to be determined by agreement between the government and the contractor, or, failing agreement, by a formula to be set out in the cancellation clause.

Johnson's Big Stick

Col. Robert Johnson, new boss of the Smaller War Plants Corp. (page 20), hopes to place 25 to 30 billion dollars worth of business with small firms. Thus, he went only a fraction of 1% of the way to his goal when he placed orders for \$30,000,000 worth of furniture with Grand Rapids firms (BW—Feb. 13'43, p7).

Significant thing about the furniture deal is that for the first time SWPC used its one powerful tool. It ordered the Federal Public Housing Authority to give it a contract for furniture, now is subcontracting the order to Grand Rapids manufacturers. Under this law, Johnson can compel procurement agencies to give him whatever contracts he may want.

Trust Buster Out

Now that Thurman Arnold's appointment to the U. S. Circuit Court for the District of Columbia has materialized, friends of the former assistant attorney general claim he had no hankering for a

judgeship. They attribute his removal from the Dept. of Justice to overzealous pursuit of the railroads and of patent reforms.

Whichever of the two likely nominees takes over Arnold's antitrust division, you can expect less fireworks. Hugh Cox, an Arnold understudy, has his choice of that job or chief of the department's new war division. If Cox chooses the second, Tom Clark will get the antitrust division. Both are capable antitrust specialists, and their performance would depend entirely on the leeway given them by the Administration.

A. & P. Case's Obituary

Dismissal of the antitrust case against the Great Atlantic & Pacific Tea Co. (BW—Dec. 5'42, p69), on grounds that the indictment was too inflammatory, isn't just a parting stab for Thurman Arnold; it is a big blow to the Dept. of Justice. The Antitrust Division hopes, however, to turn the reversal to its advantage.

In appealing from the Dallas federal district court's decision, the division will try for a ruling on how an indictment should be drawn up, how long is too long (the A. & P. bill was 34 pages), how short is too short, and whether an indictment can be killed because of its wording.

Arnold variously has been accused of making his indictments either so short that defendants were unable to put up a specific defense, or so long that they were covered with legal mud before the trial began.

Indictment trouble now is the department's big technical worry in antitrust actions. Subpoenas were the chief headache until the Supreme Court ruled they could not be appealed, thus removing the chances of legal stalls by the defendants.

Slimming the Menu

The Dept. of Agriculture's Food Distribution Administration is talking about an order trimming down restaurant eating to match the food rationing program for home eating. Idea behind the order is the imposition of uniform, nationwide curtailment, conservation, and simplification on the lunch and dinner menus. Nothing is definite yet, but proposals being discussed are: no meat portions over four ounces; not more than three meat selections on any one menu; not more than two vegetables, including potatoes, on any one meal; and not more than two desserts on any menu.

—Business Week's
 Washington Bureau

FOR WAR TODAY—FOR YOUR PRODUCTS TOMORROW



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- 3. Strength**—Skillful die designing can result in thin-sectioned zinc alloy die castings providing high strength with minimum weight.

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INDUSTRIAL NEEDS

FIGURES OF THE WEEK

	% Latest Week	Preceding Week	Month Ago	6 Months Ago	Year Ago
INDEX (see chart below)	*197.0	†196.1	193.6	186.2	171.2
PRODUCTION					
Steel Ingot Operations (% of capacity)	99.5	99.3	99.8	97.2	96.2
Production of Automobiles and Trucks	17,755	17,195	18,380	19,215	29,830
Engineering Const. Awards (Eng. News-Rec. 4-week daily av. in thousands)	\$12,227	\$10,938	\$11,359	\$35,628	\$25,648
Electric Power Output (million kilowatt-hours)	3,940	3,960	3,952	3,655	3,422
Crude Oil (daily average, 1,000 bbls.)	3,871	3,853	3,850	3,893	4,079
Bituminous Coal (daily average, 1,000 tons)	1,980	†1,917	1,850	1,823	1,817
TRADE					
Miscellaneous and L.C.L. Carloadings (daily average, 1,000 cars)	75	73	71	79	84
All Other Carloadings (daily average, 1,000 cars)	51	49	48	62	47
Money in Circulation (Wednesday series, millions)	\$15,803	\$15,666	\$15,322	\$12,870	\$11,319
Department Store Sales (change from same week of preceding year)	+19%	None	+6%	-5%	+20%
Business Failures (Dun & Bradstreet, number)	84	82	96	174	210
PRICES (Average for the week)					
Spot Commodity Index (Moody's, Dec. 31, 1931 = 100)	245.3	244.8	243.9	230.9	228.1
Industrial Raw Materials (U. S. Bureau of Labor Statistics, Aug., 1939 = 100)	157.9	157.8	157.1	153.2	153.4
Domestic Farm Products (U. S. Bureau of Labor Statistics, Aug., 1939 = 100)	202.9	202.4	199.0	183.8	180.2
Finished Steel Composite (Steel, ton)	\$56.73	\$56.73	\$56.73	\$56.73	\$56.73
Scrap Steel Composite (Iron Age, ton)	\$19.17	\$19.17	\$19.17	\$19.17	\$19.17
Copper (electrolytic, Connecticut Valley, lb.)	12.000¢	12.000¢	21.000¢	12.000¢	12.000¢
Wheat (No. 2, hard winter, Kansas City, bu.)	\$1.36	\$1.36	\$1.36	\$1.12	\$1.22
Sugar (raw, delivered New York, lb.)	3.74¢	3.74¢	3.74¢	3.74¢	3.74¢
Cotton (middling, ten designated markets, lb.)	20.59¢	20.52¢	20.43¢	18.52¢	19.34¢
Wool Tops (New York, lb.)	\$1.232	\$1.238	\$1.201	\$1.212	\$1.296
Rubber (ribbed smoked sheets, New York, lb.)	22.50¢	22.50¢	22.50¢	22.50¢	22.50¢
FINANCE					
10 Stocks, Price Index (Standard & Poor's Corp.)	85.5	83.6	79.9	68.6	68.2
Medium Grade Corporate Bond Yield (30 Baa issues, Moody's)	4.08%	4.10%	4.15%	4.28%	4.30%
High Grade Corporate Bond Yield (30 Aaa issues, Moody's)	2.77%	2.77%	2.79%	2.81%	2.84%
U. S. Bond Yield (average of all taxable issues due or callable after twelve years)	2.32%	2.31%	2.32%	2.35%	2.40%
U. S. Treasury 3-to-5-year Note Yield (taxable)	1.24%	1.24%	1.30%	1.25%	0.93%
Call Loans Renewal Rate, N. Y. Stock Exchange (daily average)	1.00%	1.00%	1.00%	1.00%	1.00%
Prime Commercial Paper, 4-to-6 months, N. Y. City (prevailing rate)	1-1/2%	1-1/2%	1-1/2%	1-1/2%	1%
BANKING (Millions of dollars)					
Demand Deposits Adjusted, reporting member banks	30,157	29,743	28,964	26,526	24,731
Total Loans and Investments, reporting member banks	41,475	41,708	41,239	33,603	30,452
Commercial and Agricultural Loans, reporting member banks	5,923	5,921	5,975	6,425	6,862
Securities Loans, reporting member banks	1,003	1,012	964	939	854
U. S. Gov't and Gov't Guaranteed Obligations Held, reporting member banks	28,428	28,648	28,142	19,509	15,433
Other Securities Held, reporting member banks	3,266	3,270	3,286	3,452	3,697
Excess Reserves, all member banks (Wednesday series)	1,640	1,700	2,150	2,381	3,357
Total Federal Reserve Credit Outstanding (Wednesday series)	5,983	5,766	6,274	3,512	2,331

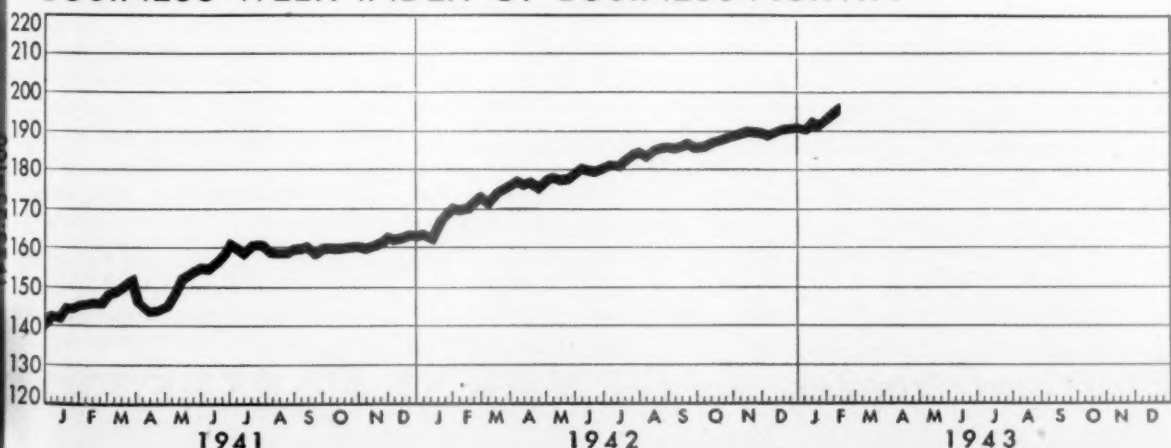
† Preliminary, week ended February 13th.

§ Ceiling fixed by government.

† Revised.

§ Date for "Latest Week" on each series on request.

BUSINESS WEEK INDEX OF BUSINESS ACTIVITY





Air Conditioning gives it OOMPH!

This war is being fought with *explosions*. All kinds...from block-busters to hand grenades. And don't forget the explosions in the barrels of guns that propel bullets and shells toward the enemy.

It takes a lot of skill to make a good explosion. Air conditioning helps.

The rate at which powder *dries* determines the way it explodes. It must not explode too soon or too late. Hence, special air conditioning . . . with temperature and humidity con-

trolled precisely . . . is used for the drying of powder.

Also, air conditioning protects the lives of workers in munitions plants by providing the safest temperature and humidity conditions.

General Electric is an outstanding supplier of the new improved kind of air conditioning equipment needed for these wartime requirements. It has developed equipment more flexible, more compact than ever before . . .

with more accurate temperature and humidity control.

Today this equipment is being devoted to winning the war. After the war, a far better air conditioning will be made available for offices and factories, stores and theatres; homes, hospitals and hotels . . . from General Electric.

Air Conditioning and Commercial Refrigeration Department, Division 433, General Electric Co., Bloomfield, N. J.

Air Conditioning by **GENERAL**  **ELECTRIC**

THE OUTLOOK

Attrition on the Home Front

Index up, new peak in sight, but then a slowdown? All reserves now being thrown in. Agriculture and coal show how much will be felt. Hours extension complicates labor supply.

Abroad this week, Russian capture of Kharkov and German advances in Russia contracted two principal determinants now in the war outlook and in the business outlook—Russian and Anglo-American offensive strength in Europe.

At home, the War Production Board take-up, President Roosevelt's request for income-limiting taxes, and renewed moves to boost prices captured the headlines.

Nor was interrelation lacking. The longer and harder the war, the more home dislocations. The big test now is in our strategy, our tactics, and the training of our soldiers. Compositions, scheduling, and manpower are to be minimized as major production headaches, but, nonetheless, the major uncertainty lies with the fronts rather than with the factories.

Production Prospects

Business Week's Index, carried along by the impetus of arms output, has advanced 4.3 points in the last three weeks to a new high of 197.0 and now points to the 210 mark indicated as possible before midyear (BW—Dec. 19 1942).

But, by the late months of the year, the picture may change. Production may not only flatten, but also ease off in the new peak it is approaching. We are rapidly using up our last reserves of men, machines, and materials. New steel, aluminum, and rubber plants to be in operation by autumn will be just about the last ones built. Meanwhile, inventories of goods will be consumed, and total employment will contract this year because of the drain to the armed forces.

Arm Prospects

Agriculture affords an instance of where these pressures will hit hardest. New farm implements will be fewer than ever this year. And according to the Bureau of Agricultural Economics, farm employment this month is down slightly from last year; with fewer men of military age, and more men, youngsters, and oldsters at work, per-man productivity is off. With the supply tightening, it is hard to know how it is going to be possible to get the 3,000,000 additional hands

needed on farms during the summer.

Storage and packers' stocks of foods—butter, eggs, poultry, beef, pork, cheese—are off sharply from last year. Inventories of protein feeds—for use, in turn, in livestock, dairy, and poultry output—are likewise down in many cases, and almost 20% of government-held wheat has already been sold for feed. Shifts of acreage to more essential crops will help ease basic meat, fats, and other supplies, but the pinch on over-all output cannot be halted.

Coal in Labor Pinch

Coal may prove another instance. In the week of Feb. 6, bituminous output reached 11,900,000 tons. That was just about the rate needed to attain esti-

mated 1943 needs of 600,000,000 tons. True, only half the nation's producers were already on a six-day work-week, and when the remainder go on the longer schedule, up to 10% more can be brought above ground weekly.

But workers are still leaving the mines for arms factories and training camps, and replacements usually prove less productive. So, by the year-end, when demands from railroads, steel mills, power plants, and others will be even higher, declining employment and declining efficiency may more than absorb the present cushion. A strike would completely upset the tenuous balance.

Hours and Profits

No wonder, then, with the manpower shortage striking so deeply into basic industries, that War Manpower Commission Chairman Paul V. McNutt this week hinted an eventual need for a 52-hour work-week in labor-pinch areas and industries. It must also be remembered that a 48-hour schedule comes out to approximately a 46-hour actual because of two-hours-a-week losses



The decline in distributors' inventories accelerated in late 1942 and into 1943. Liquidation spread from durable goods stocks into non-durables—shoes, canned goods, and most recently, clothing. Because business must keep, at least, a rock-bottom inventory to cover normal trade flow, sale of goods out of stocks must eventually end. Dollar figures partly reflect 1940-1941 price gains; so, at the current rate of

drain, the physical inventory minimum may be only six months away. Hence, more shortages. Nor is there much cushion in non-durable goods manufacturers' stocks. To maintain the stepped-up output needed for war and civilians, producers require more "in process" goods than formerly, and these inventories are priced higher. So, that 4% July-December drop is more significant than it looks.

from absenteeism and labor turnover. It is also obvious that last week's much publicized 48-hour edict (page 15) will not add sufficient reserves to lick the labor shortage—particularly because it must exempt some enterprises and some areas even when full administrative machinery is put in motion.

Already last November, manufacturing averaged 44 hours, and the work-week has lengthened since. Some time ago the federal government extended its weekly hours, and some states and municipalities have joined in. So have some white-collar employers.

In low-hour lines the new rule could benefit production. But, this week Price Administrator Prentiss Brown set

his face against wide price increases to compensate for the time-and-a-half payments. In any case, costs will go up not only by the 50% higher pay, but also by whatever additional lift in operating expenses comes from increased absenteeism, lowered efficiency, and other typical stretched-hours effects.

Who Gets Workers?

However, competition for workers increasingly drives hours up even where overtime kicks profits. For, labor flows to the fattest pay envelope, and sooner or later most lines find overtime profitable—but perhaps at a lower employment and production level.

That raises a complex and increasing

problem for the civilian economy. Who will get the workers? Jewelry or drug stores? Beauty parlors or laundries? Furniture factories or cigarette makers? Mr. McNutt's list of nondeferrable occupations provides only indirect and limited allocations.

In the absence of either stronger direct action or conscious use of profit incentives to establish what would amount to priorities on labor among nonwar businesses, the determining factors will be the hourly wage rates and weekly pay envelopes prevailing in the labor market. These, and the present profit margins linked with them, may effect a labor distribution widely variant from our true needs.

U.S. Labor Supply—Where It Is Tight and Where It Is Easy

I Areas (32) in which War Manpower Commission has already imposed 48-hour week.

II Areas (102) in which the 48-hour week may be imposed within six months.

III Areas (59) in which present labor supply is adequate, but in which shortages are anticipated after six months.

IV Areas (76) in which surpluses exist and no shortages are anticipated.

Alabama
I Mobile
II Florence, Huntsville, Talladega
IV Birmingham, Montgomery

Arizona
II Phoenix, Tucson

Arkansas
II Pine Bluff
IV Fort Smith, Little Rock

California
I San Diego
II Los Angeles, Sacramento, San Bernardino, San Francisco, Stockton
III Fresno, San Jose

Colorado
III Denver, Pueblo

Connecticut
I Bridgeport, Hartford, New Britain, Waterbury
II Meriden, New Haven, New London, Stamford
III Norwalk
IV Middletown, Torrington

Delaware
II Wilmington

District of Columbia
I Washington

Florida
I Panama City
II Tampa
III Jacksonville
IV Miami, St. Petersburg

Georgia
I Brunswick, Macon
II Savannah
III Atlanta
IV Augusta, Columbus, Rome

Idaho
II Pocatello

Illinois
I Sterling

II Joliet, Moline, Rockford, Springfield
III Aurora, Chicago
IV Bloomington, Danville, Galesburg, Herrin, Peoria, Quincy

Indiana
II Bloomington, Evansville, Fort Wayne, Gary, Indianapolis, Michigan City, Richmond, South Bend, Terre Haute
IV " "

Iowa
II Des Moines
III Burlington, Cedar Rapids, Waterloo
IV Sioux City

Kansas
I Wichita
II Parsons

Kentucky
II Louisville
III Paducah
IV Lexington, Owensboro

Louisiana
III Baton Rouge, New Orleans
IV Alexandria, Monroe, Shreveport

Maine
I Bath
II Portland
IV Bangor, Lewiston

Maryland
I Baltimore, Elton
II Hagerstown
III Cumberland

Massachusetts
I Springfield
II Greenfield, New Bedford
III Brockton, Worcester
IV Boston, Fall River, Fitchburg, Haverhill, Lowell, Pittsfield, Salem, Taunton

Michigan
I Detroit
II Adrian, Battle Creek, Benton Harbor, Flint, Muskegon, Pontiac, Saginaw
III Jackson, Lansing
IV Grand Rapids, Kalamazoo

Minnesota
II Duluth
III Minneapolis-St. Paul

Mississippi
I Pascagoula
III Aberdeen
IV Jackson, Vicksburg

Missouri
III Kansas City, St. Louis
IV Cape Girardeau, St. Joseph, Springfield

Montana
IV Billings

Nebraska
II Grand Island-Hastings
III Omaha
IV Lincoln

Nevada
I Las Vegas

New Hampshire
I Portsmouth
II Claremont
IV Concord, Manchester, Nashua

New Jersey
I Somerville
II Jersey City, Long Branch, Morristown, Newark, Paterson, Perth Amboy, Trenton
III Atlantic City

New Mexico
IV Albuquerque

New York
I Buffalo
II Albany, Elmira, Geneva, Massena, Rochester, Utica

III Auburn, Batavia, Binghamton, Dunkirk, Jamestown, Kingston, Newburgh, Poughkeepsie, Sidney, Syracuse, Watertown
IV New York

North Carolina
II Wilmington
III Charlotte
IV Asheville, Durham-Raleigh, Greensboro-Winston-Salem

Ohio
I Akron, Dayton
II Canton, Cleveland, Columbus, Lima, Marion, Newark, Piqua, Sandusky, Warren
III Cincinnati, Fostoria, Hamilton, Lorain, Mansfield, Toledo, Youngstown
IV Portsmouth, Steubenville, Zanesville

Oklahoma
II Choteau, McAlester, Tulsa
III Oklahoma City

Oregon
I Portland

Pennsylvania
II Aliquippa, Allentown, Berwick, Chambersburg, Erie, Harrisburg, Lancaster, Lebanon, New Castle, Philadelphia, Pittsburgh, Pottstown-Redding, Washington, Williamsport, York
III Johnstown
IV Altoona, Scranton

Rhode Island
II Newport
III Providence

South Carolina
I Charleston
IV Columbia, Greenville

South Dakota
III Sioux Falls

Tennessee
II Bristol
III Memphis
IV Chattanooga, Knoxville, Nashville

Texas
I Beaumont
II Dallas
III Amarillo, Corpus Christi, El Paso, Galveston, Houston, Waco
IV Abilene, Austin, Lubbock, San Antonio, Wichita Falls

Utah
I Ogden
II Provo, Salt Lake City

Vermont
IV Burlington

Virginia
I Hampton Roads
IV Lynchburg, Richmond, Roanoke

Washington
I Seattle
II Everett, Spokane

West Virginia
II Point Pleasant
IV Charleston, Huntington, Parkersburg, Wheeling

Wisconsin
I Manitowoc
II Madison, Milwaukee, Racine, Sturgeon Bay
III Eau Claire, Sheboygan
IV La Crosse, Oshkosh

Wyoming
I Cheyenne

48-Hour-Week Areas to Grow

But the only definition of the manpower-conservation order thus far issued seems to deepen the confusion around the obligations of employers in the first 32 districts to comply.

Confusion over Executive Order No. 91, providing for a 48-hour work-week (BW—Feb. 13'43, p5), grew rather unabated this week as employers realized that until Mar. 31, when the 48-hour week must be instituted, there could be only the most general answers from Washington to the questions that trouble them.

Surprise Package—At first, most employers in the 32 designated areas (page 1) felt that the new order would not apply to them because their labor force was already working at the 48-hour level or beyond. But on checking, most of them found that they had a number of departments that used employees less than 48 hours a week.

Similarly, employers whose enterprises are not located in any of the 32 areas where the executive order becomes operative immediately first thought themselves immune. They were jolted by subsequent Washington announcements which promise the extension of the mandatory 48-hour week to 102 other areas.

McNutt's Statement—Employers had the so-called "official statement" from War Manpower Commission Chairman Paul V. McNutt, who will administer the order. Salient points of the statement as it was drawn are:

(1) In those establishments operating on a work-week of less than 48 hours in the specified areas, "there shall be no

further recruitment or hiring of new workers unless such establishments can go to a 48-hour week without need for releasing workers; or, unless due to expansion or production schedules, more workers are needed."

(2) The introduction of the 48-hour week shall be made in such manner as will assure the orderly absorption of released workers in other employment or in other operations conducted by the same employer. Until Mar. 31, no employer shall be required to increase his work-week to 48 hours if such an increase would make necessary the release of any of his present employees. If by that date he has not introduced the 48-hour week because it would involve the release of some employees, he will advise the area representative of WMC of the number of employees that would be released by the lengthening of the work-week and will at the same time present a proposed schedule for the release of such workers or for their absorption within his own establishment.

(3) Where employers have not attained a regular 48-hour work-week for fulltime workers by Mar. 31, because of shortage of materials or other circumstances beyond their control, their cases will be reviewed by a WMC representative.

• **Little Change Seen**—Until Mar. 31, every employer is free to interpret this mumbo-jumbo as he sees fit, and there are indications that most of them will continue work schedules unchanged until they get an opportunity to ask a WMC representative some specific questions. Under the terms of McNutt's statement, neither hiring nor recruitment need be curtailed if it is carried on because of expansion or production schedules.

This must not be taken to mean the 48-hour week—and then maybe the 52- or 56-hour week—will not be instituted at government insistence. It will. But between the fiat in the executive order and its enforcement in the field there will be a time lag—at least until Mar. 31—in which an employer may make whatever arrangements are convenient.

• **WMC's Answers**—Some of the general questions raised by the order, for which WMC has supplied answers, include the following:

(Q) Does it apply to everyone in the areas designated?

(A) To all full-time employment. Not to part-time employees or the self-employed.

(Q) Must time and a half be paid for all time over 40 hours?

(A) Yes, where employment is covered

HOW WORK-WEEKS COMPARE

As long as the 48-hour work-week order applies only to the 32 areas of acute labor shortages, don't expect it to raise sharply the average work-week for any industry. Laggard industries like bituminous and anthracite coal mining and crude petroleum production aren't located in the 32 designated centers. Machine tools, shipbuilding, and aircraft manufacturing are much more representative of the industries in these areas. They already lead the list for length of the average work-week and, in the areas affected by the 48-hour-week order, are already operating high above their industry average. As the 48-hour order is extended to more and more areas, Manpower Commission officials will seek to bring the whole list up to a 48-hour average. On the basis of the latest national averages (below), some industries have a long way to go.

Industry	Average Hours Worked Per Week	
	Nov. 1942	Nov. 1941
All Manufacturing Industries		
Durable Goods	44.0	40.3
Machine Tools	46.0	41.8
Professional & Scientific Instruments	52.8	51.0
Shipbuilding	52.2	45.9
Electrical Machinery	48.0	42.9
Aircraft & Parts (excluding engines)	46.8	43.1
Nonferrous Metals & Products	46.6	44.3
Automobiles	46.2	41.6
Iron, Steel & Products	45.3	39.3
Furniture	43.9	40.6
Sawmills	43.1	41.0
Stone, Clay & Glass Products	40.9	38.0
Nondurable Goods	40.0	37.8
Paper & Pulp	41.1	38.6
Rubber Products	44.8	43.3
Petroleum Refining	43.6	39.3
Food & Kindred Products	43.3	36.6
Chemicals & Allied Products	42.7	40.2
Tobacco	42.7	40.9
Textiles & Apparel	40.8	38.5
Printing & Publishing	39.5	37.1
Leather & Products	39.5	38.8
	39.0	36.4
Nonmanufacturing Industries:		
Street Railways & Buses	49.0	46.2
Hotels	44.3	45.3
Laundries	44.3	42.6
Dyeing & Cleaning	42.9	42.7
Wholesale Trade	41.7	40.6
Retail Trade	40.7	41.7
Telephone & Telegraph	40.7	40.0
Electric Light & Power	40.1	39.9
Crude Petroleum Production	38.6	37.6
Building Construction	37.9	34.6
Anthracite Coal	35.7	27.2
Bituminous Coal	34.4	31.3



Not satisfied that the administration's order for a 48-hour week will solve labor shortages, Rep. J. W. Wadsworth (seated, left) and Sen. W. R. Austin (right) plug for their National Service Act to draft all men (18-65) and women (18-50) for war work.

by the wage-hour law or by collective bargaining agreements that provide an overtime bonus. No, where these factors do not apply.

(Q) What happens to collective bargaining agreements that have provisions restricting the work-week to less than 48 hours?

(A) These provisions are automatically abrogated.

(Q) How can the order be enforced against an unwilling employer?

(A) All departments and agencies of the federal government shall require their contractors to comply.

(Q) Will the Office of Price Administration permit prices to be raised because of higher operating costs?

(A) No, says OPA.

(Q) Will the 48-hour week be applied in the steel mills of Buffalo and Detroit, which are labor shortage areas, and not in Pittsburgh, which is not now listed as an acute labor shortage area?

(A) For the moment, yes. But a decision on the question of extending the 48-hour week on an industry rather than a geographic basis will be made later. There will be consultations with the industry to decide whether such arrangements are possible and feasible. A few industries will very likely be handled on an industry-wide basis.

HERE'S WEEK-END WORK that will help win the war!

*Business and Professional Men! Clerks!
College Students! Farmers! All able-
bodied men in* NAME OF CITY

You are urgently needed to work on S.P. track on week-ends in this vicinity. There is a serious shortage of track workers. We must keep our track in first class shape to move vital war traffic.

Help win the war, get healthy outdoor exercise and be paid for it.

At other points on the line, many business and professional men have been doing work and work for us. They have been very helpful and have gotten a lot of personal satisfaction out of this patriotic contribution to the war effort.

For full details, please see, or come as possible—

(NAME OF AGENT) (PHONE OF AGENT)

S·P

The Friendly Southern Pacific

OPA Gets Tough

To short-circuit demands from pressure groups, Byrnes opens a profit-cutting drive to align prices and wages.

Keynoted by Economic Stabilizer James Byrnes's anti-inflation speech last week (BW—Feb. 13 '43, p. 5), OPA's new emphasis on toughness will take its first tangible form in a campaign to cut manufacturers' profits.

• **A Political Move**—For a starter, OPA is shaving the ceiling price on steel castings 25%. Next will come ceiling reductions throughout the heavy industries, plus similar moves here and there in the consumer field (very likely involving cotton textiles, and maybe paper).

Profit-cutting is mainly a political measure; the economic pattern set by ex-Chief Leon Henderson months ago is still in force. Behind Byrnes's strategy is his desire to keep the various pressure groups partially satisfied with their position in relation to competing pressure groups. Here is the situation in a nutshell:

• **Byrnes's Delaying Action**—Within a few weeks, OPA must go to Capitol Hill and ask for a deficiency appropriation which will provide pocket money until start of the next fiscal year. This

WORKIN' ON THE RAILROAD

Needing part-time track hands to relieve shortages, the Southern Pacific Railroad finds white-collar men so good that ads (left) are circulating for more. An initial group (some below) work eight-hour week-end tricks with picks and shovels to build muscles and collect prevailing wages.



request, of course, will be the signal for farm and labor groups to pester OPA for price and wage increases. So Byrnes is figuring on staving off some of these demands by showing workers and farmers that manufacturers are not going to grow fat on war gains, that profits, wages, and farm prices are to be fixed in equitable relationship to each other.

If the strategy of maintaining a political status quo succeeds—even in part—Byrnes may gain enough time to take OPA's case belatedly to the public and attempt to build up support for his position. With a view to achieving this end, Price Administrator Prentiss Brown has named Lou Maxon, head of the Maxon, Inc. advertising agency, to head OPA's public relations in place of Robert Horton, who resigned last week (the first OPA big shot to depart under Brown's regime).

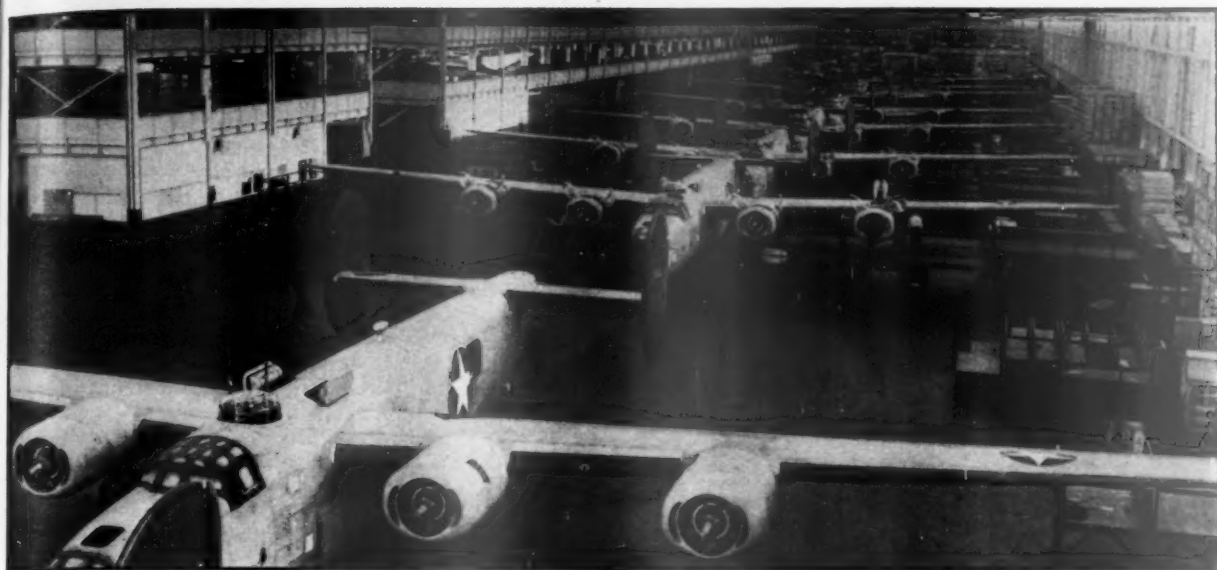
• **Public Relations Also Accented**—Meantime, OPA has been staging a series of executive meetings wherein Brown has promoted toughness and better public relations. Every price official has been requested to examine the profits of industries falling within his purview with the idea of finding a place to make some cuts. Some clue to the coming campaign may be derived from the following table (worked up by Henderson shortly before he departed):

	Percent Return on Net Sales*		
	1939	1940	1941
Aircraft & Parts.....	13.5	21.9	26.0
Building	8.5	10.1	15.4
Industrial Machinery...	14.9	21.8	26.2
Iron & Steel.....	6.9	11.6	15.8
Nonferrous Mining Products	12.2	15.9	18.1
Shipbuilding	7.2	16.0	11.6
Beverages	8.8	8.3	9.5
Chemicals	21.5	24.6	27.1
Food	4.0	4.3	5.2
Paper & Products.....	5.4	12.0	16.5
Textiles	6.5	8.0	12.8
Trade & Services.....	5.5	6.0	7.9

* Based on sample 1,324 large corporations; 1942 data not computed

• **How Cuts Will Come**—The table shows plainly that industries contributing directly or indirectly to the war program are showing the largest increases in gross profit (due, usually, to lower unit costs) and thus are prime candidates for ceiling reductions. But some of these industries already are subject to contract renegotiation by war procurement agencies (page 19), thus often are forced to sell below ceiling prices. Hence OPA's coming cut in ceilings appears to be half formality, half real butchery—but above all a grandstand play for the farm and labor groups.

This pattern involves imposition of rigid controls on specific commodities to replace the loose general prohibition of all price increases above the highest point of March, 1942, which was the basic principle of General Maximum Price Regulation No. 1. The new controls consist of specific dollar-and-cents



Delayed for many reasons, production of B-24 bombers hits its stride at last in Henry Ford's Willow Run plant.

ceilings, established at the manufacturing level, and specific percentage margins by which these prices may be increased for wholesalers, retailers, and all others involved in distribution.

● **Foods Likely Exempt**—In nondurable goods, textiles and paper show the highest gain in returns. Here revision of ceilings certainly would provide a cushion against inflation. But the depth of the cushion would be limited strictly by the fact that only a handful of industries can be cut back. In such an important field as foods, profit reductions are virtually impossible, especially when such nonprocessed foods as fresh fruits and vegetables are involved.

To give more oomph to the now all-important political phase, Byrnes himself has taken a stronger hand in OPA, with Brown less in evidence than Henderson was. Brown's position unfortunately was complicated by the fact that he told his first press conference that prices would probably rise about 4% a month—an innocuous statement of the plain truth which was blown out of all true proportions by wide publicity. At any rate, Brown has not tackled the press again.

● **Byrnes's Self-protection**—For his part, Byrnes can't start coping with pressure groups effectively unless he starts from the tough level. An easier policy would impair his bargaining power, swamp him with requests for additional leniency, and perhaps play havoc with a tough tax program.

Insiders know, of course, that toughness is relative, that in a political fracas there must be a "give" somewhere. Insiders, however, are not too alarmed. So long as the "give" is confined to well-spaced price increases, it means merely price-rises—not inflation, which is the loss of confidence in money.

Willow Run Runs

Problem plant grinds out B-24's on schedule after siege of growing pains which almost shattered Ford myth.

When the war began, everybody blithely said: Well, if it's a mass production war, that's just our dish; wait till Detroit gets rolling. For to a proud America, and to a world at large, Detroit always has been synonymous with mass production genius. And the outstanding symbol of Detroit's mechanical wizardry always has been old Henry Ford. When Henry went to war—well, Berlin was the next stop.

● **Came Disillusionment**—That was the early spirit of confidence. Then came disillusionment. Detroit seemed laggard about converting. Old Henry appeared to be hanging back. Finally, release of the big news about Willow Run, the most gigantic factory ever to be built, revived a flagging confidence.

Things were on the up and up again. Henry had gone to war, and in the grand manner which a nation that had grown up with the Model-T Ford had come to expect. Henry could lick anybody, just like he'd licked Wall St. Why, hadn't Henry been one of the pioneers in big plane construction, back in the 'twenties when the Ford tri-motor ship was taking passengers on sightseeing trips over the big cities at \$10 a throw? Planes or autos, Henry could do the job. And Henry would.

● **Henry's New Partner**—But, of course, Willow Run wasn't all Henry. In fact, it wasn't Henry at all, as far as physical facilities were concerned. The Defense

Plant Corp. was putting up the cash. It was the first time since Ford had wrested control of his industrial empire away from the other early partners that anybody had had a share. This time the United States was being cut in.

Then the public began to realize that Henry wasn't going to pull a superdeluxe bomber all equipped with special Ford secret weapons out of his pocket. Henry was going to build somebody else's ships—the Consolidated bomber—just as he was already building somebody else's engine, the Pratt & Whitney.

● **That Let-down Feeling**—Everybody knows that Henry Ford is an individualist. Maybe, said the man in the street when Willow Run failed to produce bombers the week after it was announced, maybe Henry was having partner trouble. But whether it was partner trouble, or plane trouble, or just plain trouble, a nation that had come to accept production miracles from Ford as routine felt let down.

Actually, the nation wasn't being let down in the least. Henry wasn't going to do a job unless he could do the best possible job. And when you undertake to do the best possible job on the biggest scale in the world, operating at the finest engineering tolerances—well, you don't have production yesterday. If anything could be blamed for the disillusionment, it was the too-big buildup.

● **Producing on Schedule**—Now at long last, America is finding its faith in Henry Ford and Willow Run reestablished. And this time it rests on the solid fact of bomber production. Willow Run is rolling at last, and its production of Consolidated B-24's is meeting the current War Dept. schedule. However, the Truman committee of the Senate is not satisfied and plans an investigation.

The plant was first proposed to build



Raised on stilts to offset the need for foundations, hundreds of tiny shacks (left) house Willow Run workers' families in a colony near the plant. Distinct housing improvement is Willow Lodge (below), \$2,200,000 dormitory project which will be ready to shelter 3,000 men and women workers economically in 15 buildings by early March.



parts only. Complete assemblies were a later concept. When assemblies were proposed, Ford had some ideas of his own to make the job easier. They included changing some of the components, which would make the Ford-built Consolidated B-24 different from Consolidated's own product. That problem is still alive. The still unanswered question is whether more planes later will prove more valuable than a faster start a few months ago. Some critics still contend that Willow Run will be another story of "too much, too late."

• **Retooling Problem**—Willow Run is magnificently tooled. Aircraft makers look askance at this, for changes flow in to all of them a dozen a day. Whether Willow Run is flexible enough to handle changes in stride remains to be seen, but the evidence thus far seems to indicate that it can, thanks to Ford's big River Rouge tooling facilities and Detroit's numerous tool and die shops.

Facilities for living near the plant are limited; turnover has been considerable, in large share because of the time of travel to and from work. Job openings are due to increase in Detroit itself; as far as Detroit's job freeze (BW—Dec. 19 '42, p93) permits, a worker will choose a berth nearer his home.

• **Materials Bulk Large**—Materials constitute another problem. Willow Run is planned on a gigantic scale. Plans have called for a float of enough material to produce 1,000 planes, which requires perhaps 10,000 tons of aluminum.

Stockpiling to that level will be a big drain on the nation's aluminum supply.

To build B-24's in three figures weekly, assembled or ready for final assembly elsewhere, was the single purpose of Willow Run. It was designed so that materials and components come into the plant at one end and flow to completion at the other end.

• **Hundreds of Presses**—Aluminum is first sheared and formed into channel sections (as for stringers) or flat sections (as for wings). There are several hundred automobile-type presses, many hydraulic. Indicative of the production aspect of this work is the fact that there is one battery of Yoder machines, rolling out channel sections, that has around 700 sets of rollers for changes in the cross-sections of the parts. Heat-treating furnaces handle sections longer than 30 feet in one piece.

Parts thus made in mass are racked, awaiting movement to subassembly stations. As work leaves the racks, timing becomes more important. The big jigs must be kept filled and in work. Such jigs have raised the question of overtooling at Willow Run. But in early 1942, a large aircraft maker required 60 days to fabricate a wing; these jigs make it possible in two days. The jigs can be modified, too. Provision for change is apparent in nearly all Willow Run jigs and fixtures.

• **Steel for Endurance**—But modification will be less easy on press jobs. Willow Run has more than 10,000 hard dies of

steel; aircraft producers prefer softer dies, more easily made. The steel dies of Willow Run will last for long production runs; the aircraft industry questions whether the runs will be that lengthy.

Officially recognizing this question, the Office of War Information said: "The comparatively permanent and inflexible methods of the tooling used at Willow Run have taken longer than was expected to complete. The theory behind Willow Run was that the size of the permanency of the tooling would require a much greater time to complete than would a smaller plant using the aircraft industry's more flexible tooling methods."

• **The Mouth-opener**—Willow Run is no surprise to automotive men, who see in it the multiplicity of mating and assembly stations that characterize the passenger car plant. The size of the job is the mouth-opener—elevators which haul wings some 40 feet into the air, chain conveyors hung from posts 60 feet apart.

Any plant that costs \$100,000,000 or so is going to provoke detailed discussion—and in the case of Willow Run, this has revolved about the question of overtooling. But if Willow Run can turn out planes by the hundreds, in piece or in whole, each week, and keep pace with dozens of engineering changes daily, it may confound the critics.

• **Final Test**—In the final analysis, the wisdom of Willow Run's designers and sponsors will be measured by the extent to which this fabulous enterprise hastens the end of the war.



BACK AGAIN

Long forecast but long deferred, the return of William M. Leiserson from NLRB to the National (railway) Mediation Board (BW—Nov. 21 '42, p119) has materialized as union demands for wage increases threaten.

Profit Control

Case histories show how contract renegotiation works out for individual companies. No blanket rule applies.

Manufacturers may get a surprise—either pleasant or unpleasant—if they take as rule-of-thumb the joint Army-Navy statement that percentage profits on war business will be from a half to a third the net on comparable peacetime work. While this represents a general target for renegotiation, both services emphasize that they are sticking to their policy of fitting the adjustment to the individual case.

• **Case Studies Offer Clue**—More reliable indicators of what can happen in renegotiation cases are figures obtained this week on companies that have already gone through the process. Company names and products cannot be identified, and figures have been rounded to keep competitors from determining the manufacturers involved. But these are actual cases. While it happens that these companies have had most of their dealings with the Navy, contractors working with the other services report similar results.

Both Army and Navy stress the fact that no case constitutes a precedent; each contractor presents an individual problem, and the boards have no standard formula. Examples shown in the accompanying table are merely a sample of completed cases. They are not controlling decisions or guides to future policy.

• **The Factors Considered**—Boiled down to one word, the basic principle of contract renegotiation is flexibility. Price adjustment boards have complete discretionary power within the wide limits set by Congress. Their object in each case is to review all the factors that have a bearing on the manufacturer's profit position.

Boards consider not only the contractor's costs and percentage markup, but also the difficulty of his job, the ingenuity he has shown, the risk he is taking. This means that two manufacturers with similar income statements and balance sheets may come out of renegotiation with entirely different results.

• **Why No Formula Fits**—Flexibility has advantages and disadvantages. To contractors it often looks like caprice. They worry because they cannot foresee what effects renegotiation will have on them, and they resent the fact that their earnings must depend on the discretion of adjustment boards instead of on established rules.

But renegotiation officials insist that any cut and dried formula would stifle

incentive and ruin many of the contractors who clamor for it. They point out that a company with no conversion problems and an efficient plant might do well with an 8% profit on sales. Another company making the same product but faced with the necessity for converting facilities and working with obsolete machinery might need 15% to break even. No flat rule, they say, could give both cases a fair result.

• **Two Men in Charge**—In the long run, success or failure of renegotiation will depend on how the boards use their discretionary power. And this means the whole renegotiation picture focuses on two men, the chairmen of the Army and Navy adjustment boards. Both are business men themselves. Maurice Karer, head of the Army board, is former president of Jewel Tea Co. K. H. Rockey, Navy chairman, looks like and is a retired banker, among other things.

As an illustration of how its policy works out on the average, the Navy has compiled figures for 21 companies now finished with renegotiation. Renegotiable business before adjustment totaled \$1,615,156,009. Costs came to \$1,304,605,552, which left a profit before taxes of \$310,550,456. This represented 19.2% on sales, 23.8% on costs.

• **Comparative Figures**—Renegotiation scaled down total sales value to \$1,445,170,716, leaving profit before taxes of

\$140,565,163. This was 9.7% of sales, 10.7% of costs. In 1939, the same 21 companies cleared \$41,361,174 before taxes, representing 10.8% on sales and 12.1% on costs.

On total business (including both renegotiable and civilian contracts) the 21 companies cleared \$211,686,165 before taxes, which represents 11.9% on sales and 13.6% on costs. After taxes they came out with a net of \$49,381,878, which compares with a 1939 net of \$33,677,755.

• **Sixty Cases Settled**—While the 21 companies represent a good cross section of renegotiation cases, they do not tell the whole story by any means. To date the Navy has closed some sixty cases, involving total contracts of \$12,125,000,000. Recoveries add up to \$732,186,000. What these aggregates fail to show is the variation between individual cases. This stands out more clearly in the examples shown in the accompanying table.

Case I is a motor manufacturer, now making substantially the same products he turned out in peacetime. He has put his own money into \$1,560,000 worth of emergency facilities, but is using \$5,225,000 in working capital provided by the government. Although his total business has nearly doubled, the renegotiable part of it amounts to only \$14,150,000. Adjustment in his

How Four Contracts Were Renegotiated

Case I	Sales	Net before taxes	% of sales*	Net after taxes	% of net worth
Renegotiable business					
Before adjustment..	\$ 14,150,000	\$ 2,250,000	15.9%		
Amount recovered..	500,000				
After adjustment...	13,650,000	1,750,000	12.9		
Total business					
Before adjustment..	48,520,000	9,350,000	19.3	\$3,680,000	15.9%
After adjustment....	48,020,000	8,850,000	18.4	3,560,000	15.3
1937-1940 average..	26,410,000	2,820,000	10.7	1,960,000	—
Case II					
Renegotiable business					
Before adjustment..	1,770,000	690,000	39.2		
Amount recovered..	500,000				
After adjustment...	1,270,000	190,000	15.3		
Total business					
Before adjustment..	4,200,000	1,270,000	30.1	490,000	32.7
After adjustment...	3,700,000	770,000	20.7	350,000	23.5
1937-1940 average..	1,680,000	240,000	14.1	190,000	—
Case III					
Renegotiable business					
Before adjustment..	130,600,000	17,800,000	13.7		
Amount recovered..	7,800,000				
After adjustment...	122,800,000	10,000,000	8.1		
Total business					
Before adjustment..	139,100,000	20,000,000	14.4	4,000,000	122.2
After adjustment...	131,300,000	12,200,000	9.3	2,400,000	74.3
1937-1940 average..	5,000,000	1,100,000	21.8	800,000	—
Case IV					
Renegotiable business					
Before adjustment..	2,340,000	930,000	39.8		
Amount recovered...	720,000				
After adjustment...	1,610,000	205,000	12.8		
Total business					
Before adjustment..	3,360,000	1,320,000	39.5	360,000	63.9
After adjustment...	2,640,000	600,000	22.6	160,000	24.5
1937-1940 average..	300,000	34,000	10.4	25,000	—

* Percentages are exact in each case. Dollar figures have been rounded to prevent identification of company. Hence, percentages cannot be computed from figures shown.

case brought the profit on renegotiable business down to 12.9% of sales.

• **More Case Histories**—Case II is a radio manufacturer who is doing all his own financing. Here the adjustment took 70% of his profit on renegotiable business but still left him with 15.3% on sales.

In Case III, an aircraft company was making a smaller percentage profit than it did in peacetime, but the enormous jump in volume had blown up profits by almost 2,000%. Renegotiation trimmed profit to a scant 8.1% on sales, but even after taxes the company is making about three times its average peacetime income.

• **Small Man's Experience**—Case IV shows what happens when a small metal working company is caught in the rush of war business. From an average income after taxes of \$25,000 in 1937-1940, it shot up to \$360,000. Renegotiation trimmed it back to \$160,000.

Other examples illustrate the variety of factors that influence the final decision. Company X, making aircraft parts, had \$3,200,000 in fixed price contracts, \$30,000,000 in cost-plus-fixed-fee business. It was using \$5,500,000 in government financed facilities. Profit on its total business before adjustment was 12%, which compared with 35% as the 1937-1940 average. Renegotiation trimmed profits by an even \$1,000,000, but all except \$200,000 of this would have gone into taxes. Net result was a cut in profits after taxes from \$800,000 to \$600,000.

• **From Loss to Profit**—Company Y had undertaken an elaborate conversion job to turn out ordnance. On its fixed price contracts it was netting \$650,000 before taxes, or 8.6% of sales. On cost-plus-fixed-fee business, it was clearing \$5,725,000, which represented 6.3% on sales. Renegotiation cut down the

cost-plus profit by \$500,000, which brought the profit percentage to 5.8% of sales. As a result, the company cleared \$1,970,000 after taxes (10.5% of net worth) instead of \$2,270,000. Its earnings record for the 1937-1940 period showed a deficit.

Company Z, organized in 1940, had no past earnings to serve as a yardstick. It was clearing \$880,000 before taxes, which was 27% of sales. After renegotiation, it returned \$550,000, leaving a profit of \$330,000 before taxes—12.3% of sales. Nonrenegotiable business brought total income before taxes up to \$500,000.

Little Man's Pal

A manufacturer himself, the new head of Smaller War Plants Corp. looks like the spark plug that is needed.

Small manufacturers, who have taken an unmerciful beating since war began, saw hope of relief this week as a big manufacturer started battling for them in Washington. Their new champion is Col. Robert Wood Johnson who took charge of the War Production Board's Smaller War Plants Corp. last week.

• **His Popularity Assured**—Johnson is chairman of Johnson & Johnson, manufacturers of surgical dressings at New Brunswick, N. J. Assigned his new post by Army Ordnance, which leaves him a free agent in the SWPC job, Johnson replaces Lou Holland who was strongly criticized by Congress and small business for pulling his punches.

Events line up in Johnson's favor. He is the man President Roosevelt and WPB chief Donald Nelson wanted for

SWPC when it was created by Congress last June; at that time Johnson decided in favor of his Army commission. Congress also is for him. Senators fairly purred at a December committee hearing when Johnson described how he had got contracts for small plants while directing Army ordnance orders in the New York district.

• **Help Has Begun**—Perhaps most important of all, expansion in war production—such as it is—must, from now on, be met by small plants since the big fellows have about all they can handle. Greater output is possible principally through employment of men made idle by the squeeze on consumer goods.

Help for the blighted areas is coming up. The day Johnson took over SWPC it was announced that \$30,000,000 worth of contracts would be placed in Grand Rapids, Mich. This was an opening move in a campaign by SWPC to examine distress areas plant-by-plant and give them war orders that they can handle (BW—Oct. 10 '42, p20), because these are the areas in which there is available manpower—and that is a growing bottleneck.

• **Johnson Trails a Parade**—High hopes attach to Johnson even though he comes at the end of a long and disappointing procession. First to take up the small manufacturers' battle was Robert L. Mehornay, Kansas City furniture man. He had begun to make progress when he was summarily displaced by Floyd B. Odlum, president of Atlas Corp., New York. Congressmen charged that Odlum saw the problem as a publicity job, that he merely tossed a few crumbs to small plants in a spirit of charity.

Afterwards came Walter H. Wheeler, Jr., president of Pitney-Bowes Postage Meter Co., Stamford, Conn.; Charles H. Hallenborg, vice-president of the Dictaphone Corp., New York; Basil T.



ROLLING RELICS

Saved from the scrap pile by a government purchase, 55 cars of New York's old Sixth Avenue elevated have been set down in unfamiliar surround-

ings—with some still in the business of hauling commuters. Eleven of the cars, revamped and painted orange, make a 50-mile daily round trip behind an electric engine taking workers from Springfield, Ill., across the prairie to

Illioipolis war plants, and back again. The government pays Illinois Terminal Railroad Co. a flat fee for engine and crew and receives \$1.50 a week from each rider. The rest of the cars are in reserve.

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THESE ARE THE NEW ARCTIC SHELTERS for the Army Air Forces; the one at the left is up and in use; the other at the right is being erected. These shelters

are so light and compact that they can be flown in large numbers to advanced bases where strategy demands airplane maintenance in this global war.

For keeping fingers nimble...

IN THE ARCTIC, where the temperature often hits 65 degrees below, with howling snow storms the rule and not the exception, it's mighty tough to repair an airplane engine.

It's tough to keep fingers nimble for working on parts and it's equally tough on the engine itself.

Yet, the Army Air Forces are meeting this problem with portable shelters—a vast number of them. You see two pictured above.

These ingenious structures have semi-circular ribs of laminated wood. These ribs are covered with heavy fabric mattresses; two for the roof and sidewalls and one each for the front and back.

These mattresses are lined with Fiberglas,* an unusually light yet efficient insulating material made of glass in fibrous form.

The lightweight Fiberglas gives these shelters a number of advantages. They can be carried in large numbers by cargo planes. They are compact when

knocked down and save shipping space. They are so easy to handle that they can be put up in an hour and taken down in even less time.

And because of its high insulating value, Fiberglas saves about 20,000 pounds of fuel per season over what would be needed to heat an uninsulated shelter. This provides an additional saving of shipping space to transport other supplies.

In addition, these shelters are engineered to stand up to most arctic gales; so cleverly built that, if bigger working or living space is needed, two or more shelters can be put end to end. In every part, they are highly resistant to fire, moisture, and rot.

In designing and producing these ingenious structures, full credit goes to Army Air Forces technicians... also to the company ① of farm-building and equipment engineers now devoting its major efforts to war production.

Many wartime uses of Fiberglas.
① Name supplied on request.

glas like this one prevent us from supplying as much of this material as is desired to insulate houses and aid in the fuel-saving program on the home front.

But we're mighty proud that both the Army and the Navy are finding Fiberglas so valuable to them.

To meet these needs our production is being constantly expanded. We are determined to let nothing stand in the way of supplying enough Fiberglas for vital wartime uses, where Fiberglas is the only suitable material for the job to be done. Owens-Corning Fiberglas Corporation, Toledo, Ohio. In Canada, Fiberglas Canada, Ltd., Oshawa, Ontario.



OWENS-CORNING

FIBERGLAS

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Example No. 2

This is one of the many examples of how DeLuxe is serving American Industry and Commerce in War-time.

Cleansed Oil and the SEA!

In the marine diesel field, as in the motor transport, automotive and industrial fields, DeLuxe Oil Cleansing has been found to be most effective in reducing operating costs . . . reducing engine wear and repairs . . . increasing efficiency and reducing oil and fuel consumption.

The reason for the exceptional results obtained with DeLuxe filters, is due to the exclusive filtration principles employed. These filters do more than strain or filter oil. They actually cleanse oil of contaminants before (not after) they can form into sludge or other destructive substances.

As a result of comparative tests, DeLuxe oil filters have been adopted as standard or optional equipment for practically all gasoline and diesel engines.

If you have a problem of oil cleansing or one allied to it, perhaps DeLuxe engineering service can be of help in solving it. Your inquiry will be appreciated and involves no obligation. Address DeLuxe Products Corp., 1425 Lake Street, La Porte, Ind.



Oil filters for all types of gasoline and diesel engines



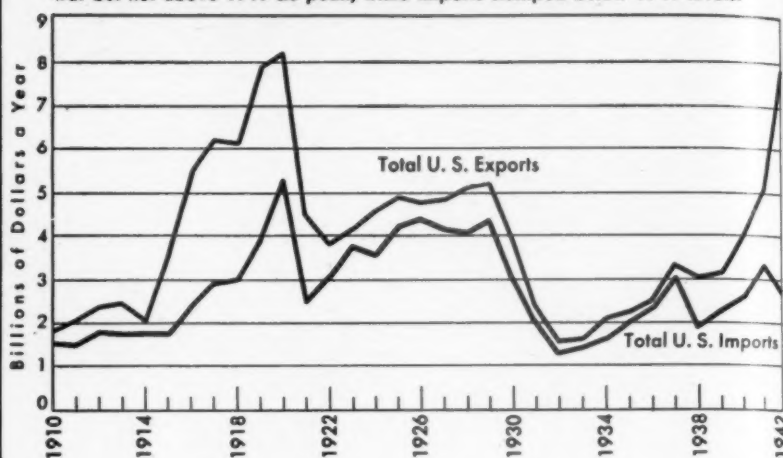
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EXPORTS HIT NEW WARTIME RECORD

Bulging lend-lease cargoes helped boost 1942 exports above totals for last war but not above 1919-20 peak, while imports slumped below 1941 levels.



Data: Department of Commerce.

© BUSINESS WEEK

United States exports in 1942 (including lend-lease deliveries and sales to foreign customers but not direct supply shipments to our own troops overseas) topped both 1917 and 1918 records but not 1919 and 1920—the two peak years in our export history. Imports were down, reflecting the loss of huge rubber and tin markets in the

Far East and the curtailment of Latin-American coffee and sugar imports. Exports last year topped \$7,826,000,000, compared with \$6,234,000,000 (highest total during the first World War) and with \$8,228,000,000 in 1920, our biggest export year. Experts believe that shipments overseas in 1943 may reach a new peak.

Bonnot, president of the Bonnot Co., Canton, Ohio. These three worked through WPB's contract distribution division; all were competent executives in their own right. But they were hampered by shadowy boundaries of authority; by the fact that the Army, Navy, and Maritime Commission actually placed all contracts; by the conviction of these services that only big concerns had the facilities and ability to deliver on time.

• **Congress Steps In**—"All right," Congress said in effect, "if the trouble is lack of authority we will create an organization with all the power necessary to save the small business man."

Result (June 11, 1942) was passage of the act creating the Smaller War Plants Corp. It was given authority to take and place any contract it wanted; it could become a prime contractor and parcel out parts to subcontractors; it could give contracts to big companies if that would help little fellows. And \$150,000,000 was set aside to help finance small plants where it was found necessary to do so.

• **SWPC's First Boss**—Holland (president of Holland Engineering Co., Kansas City, Mo.) was the first head of SWPC. Reason for his appointment was his brilliant handling of a small-plants pool which parceled out an im-

portant war order to subcontractors. Five months after Holland's appointment, small manufacturers were kicking as hard as ever so Congress got busy.

In December a joint hearing of the Senate and House small business committees put Holland on the pan. Congressmen charged that he had ignored express intents of the act, that under him the SWPC had not let a single contract, that he had merely referred prospective contractors to military procurement services. Asked why he hadn't exercised his power, Holland replied:

"I was like a policeman—that power was the gun on my hip."

• **Complaints Continued**—Congressmen noted that their intimidation hadn't worked. Tough old admirals and generals weren't afraid of legal firearms as long as they stayed in the holster. They went right ahead placing their orders as before. Holland's goose was cooked by his own admissions.

At these and subsequent hearings the troubles of small plants were rehearsed and redefined. Principal complaints were that small companies were not given sufficient time to prepare bids, that they couldn't learn in advance what the armed services wanted, that difficult specifications and precisions were beyond their engineering abilities. A senator remarked sourly that "a small busi-

THIS WHITE FLAG MEANS *FIGHT!*



The headlight of a troop train stabs through the blackness of a southern night...white flags flying.

A fast freight snakes its way through the southern foothills...white flags flying.

White flags of surrender? Not these flags! These white flags mark an "extra" train. These white flags mean troops are moving, war freight is rolling. These white flags mean *fight!*

Today, the Southern Railway System is flying more white flags than ever before. Extra trains by the hundreds are rolling along to help move men, supplies, materials of war.

Tomorrow, when free men in a free world have won their Victory, these "extra" trains of

the Southern will carry a different kind of freight...rich foodstuffs and great crops from the Southland's fertile farms and fields...cheaper, better products of manufacture from the *new* South's modern industries.

This is the vision of the men and women of the Southern...who see in the white flags flying today the promise of a better tomorrow.

Ernest E. Harris
President

SOUTHERN RAILWAY SYSTEM
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FIRST THINGS FIRST



For ninety-seven years POWELL has specialized in the manufacture of valves . . . almost a century of improvement of valve design, workmanship, and materials.

"First things first" has been, is now, and will continue to be the policy and the practice of POWELL Valvengengineering.

"First things first" today means putting everything for Victory ahead of everything else. In this critical period, Industry is invited to make full use of POWELL's experience and resources in the making—and maintenance of valves.

POWELL VALVES

Every type of valve of every known material

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ness man is one who cannot afford to have a full-time representative in Washington."

• **The Old System**—Special recommendations for putting Johnson atop SWPC were his efforts while handling ordnance orders in New York to combat earmarking of orders in Washington and to reduce "continuation orders." By earmarking for certain concerns, Washington reduced the local offices to minor bureaus from which local officers could give orders only to specified firms. Continuation orders were repeats for firms that had already delivered. At one time, 70% to 85% of New York orders fell in these two categories.

Earmarking and continuation placements are defensible on grounds that a difficult contract can be met only by a company specializing in such work, or by a company that has tooled-up and has trained men specifically for a hard job. Johnson attacked these habit-forming practices (since restricted by the Army). He took the trouble to see if smaller firms could take the contracts with a saving to the government. His ordnance engineers advised small plants, thus helped make up for one of their most glaring deficiencies.

• **Johnson Is Progressive**—Everybody is pulling for Johnson in his new job. He is credited—even by New Dealers—with a sense of social responsibility. He has long believed in shorter hours and higher wages as a formula for a prosperous peace economy. Johnson is 49 years old, young enough and alert enough to shift with the times.

But outside WPB there is a sound as of knives against grindstones. Monday's newspapers broadcast a report of the House small business committee that charged mismanagement within the WPB and asserted that the small business man is threatened with extinction through lack of consideration in the war program.

Last week Senate Republicans sat back and enjoyed themselves as Democrats tore into the WPB. Sen. Barkley, Democratic leader, asserted that the Smaller War Plants Corp. had not functioned as Congress intended because it had not been allowed to do so by the WPB. His censure sounded like bouquets in comparison with the criticism of Sen. Truman, who heads the committee that watches the conduct of the war.

Sen. Truman's vitriol may have been tintured by the fact that his home is near Kansas City and that he is a friend of the ousted Mr. Holland. The senator declared that a small band of big business "conspirators" surrounding Chairman Donald Nelson of the WPB had created the world's greatest monopoly under the eyes of Congress. He supported the statement with the charge that 100 large corporations had received 70% of war contracts, while 175,000 smaller firms got 30%.

Over the Hump

Machine tool industry has virtually finished work on plane program; next question is how to employ its capacity.

The managers of war production don't often have choices. Most of their decisions have been dictated by the grim necessity of finding some one way of doing a job. Today they have a choice among several advantageous ways of using one major production resource. That resource is the most flexible in America—the machine-tool industry, the industry that can make anything out of metal and do it to high precision.

● **Big Job Nears End**—Demand for machine tools is now going over the hump and will soon start down. Tool production rose, practically in a straight line, from \$300,000,000 a month in June, 1940, to \$1,300,000,000 a month last September. Since then it has been swimming along at that peak. This month will see a substantial decrease in the tooling process for the 1943 aircraft program of 100,000 or more planes, giving notice that the heavy demand is over.

Capacity of the machine-tool industry is dropping at the same time as demand. Dependent on its supply of highly skilled manpower, the industry is beginning to suffer from loss of its labor—to the draft, other plants, etc. Too, it may not be able to continue indefinitely the 60-hour week that most tool firms are working. Nevertheless, expectation is that excess capacity will be available in coming months. The question is what to do with the capacity of an industry that is capable of just about anything except mass production.

● **Retire Old Tools**—One possibility is to keep the tool builders building tools as hard as they can. Easier availability of modern tools could open a lot of bottlenecks in industry generally. The idea would be to substitute high-production or special-purpose tools for the thousands of older tools that have been converted from peaceful pursuits to war goods.

A developing manpower shortage this year will make machines with a high man-hour output very desirable. The aircraft industry, largely equipped with new tools, has been turning in spectacular man-hour savings, and modernization of tools could do a similar job in other fields. This approach is being pressed by men close to WPB Chairman Donald M. Nelson, and it will be continued in large measure—to keep tool capacity available for sudden shifts in war needs, if for no other reason.

● **Tricky Jobs**—At the same time, Production Vice-Chairman Charles E. Wil-

TODAY AND TOMORROW

KEEP 'EM
ROLLING

BUY
WAR
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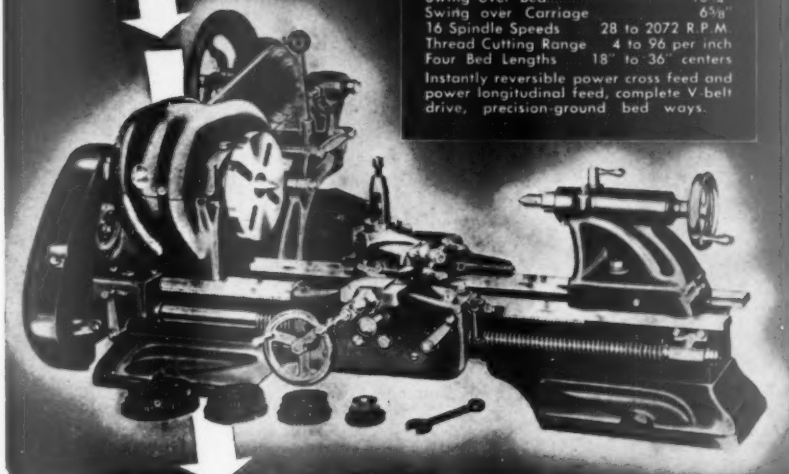
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F-SERIES 10" LATHES

CONDENSED SPECIFICATIONS

Swing over Bed	10 1/4"
Swing over Carriage	6 5/8"
16 Spindle Speeds	28 to 2072 R.P.M.
Thread Cutting Range	4 to 96 per inch
Four Bed Lengths	18" to 36" centers

Instantly reversible power cross feed and power longitudinal feed, complete V belt drive, precision-ground bed ways.



"Match the Machine to the Job"

More planes, more ships, more tanks, more guns . . . the whole fight for freedom can now be waged decisively thanks to America's great producing power. And industry is learning production techniques that will make the nation the foremost contender for world markets when the war is won.

Most spectacular progress has been made in the use of huge jigs and massive assemblies. But just as important are the modern, fast precision tools that take over small parts production so capacities of larger machines will not be wasted.

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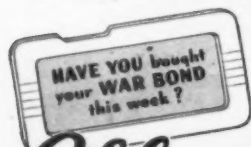
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The supply of these All-fibre Type-writeable Address Cards is plentiful. They use no metal, and they are *not* rationed. You can enjoy the unique advantages of using all the Elliott Address Cards you need—in wartime as in peace.

And here's additional good news in these days of many necessary rationing orders. You can buy a good used Elliott Addressing Machine without priority of any kind. Though of course new Elliotts are limited to Government priority.

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son and his crew of bottleneck busters are rubbing their hands over the possibility of throwing certain tricky production jobs into the machine-tool plants. One such job would be to take on part of the production of aircraft superchargers—difficult to make because of the high speed at which they operate.

It is ironic, but perhaps characteristic of the war program, that it was just as the tool situation was easing a bit that WPB and the armed services got together on a long overdue policy for shifting around, from plant to plant, the tools owned by the Defense Plant Corp. The policy theoretically applies also to privately owned tools, but it is the DPC-owned stuff that officials really have their eye on.

• **Idle Tools**—WPB has no intention of putting its eye to factory keyholes, looking for an idle lathe. Plans are in terms of larger-scale operations. One type will take tools away from plants working on relatively less urgent programs to speed up the more urgent jobs. Another contemplates borrowing from a plant that is largely tooled up before it is ready to start work.

The order empowering the machine-tool division of WPB to take this sort of action came directly from Vice-Chairman Wilson's office. It was the first fruit of Wilson's take-over of the tools division.

• **Opposed by Services**—Big obstruction in the past to wholesale transfers of DPC-owned tools has come not so much

from industry—which is in no position for effective resistance—but from the Army and Navy branches. Officials of the Air Forces, Ordnance, Bureau of Ships, etc., have insisted on hanging onto their reserve supplies of tools so as not to be blamed for a failure if they should get caught short.

BAD NEWS FOR ROACHES

A new roach powder which will help stretch present stocks of insecticides has just been developed by Dr. S. Marcovitch, entomologist with the University of Tennessee's Agricultural Experiment Station, Knoxville. The university is now negotiating with manufacturers to put it on the market.

Dr. Markovitch began work on it after reading two years ago of how eleven persons died and 52 others were made seriously ill at Pittsburgh when a cook mistook roach powder for baking powder.

"Too frequently we hear of persons poisoned by roach powder because of mistakes like this," said Dr. Marcovitch. "I made it my goal to eliminate such accidents by developing a roach powder which will kill only roaches."

This discovery uses a "carrier and activator" which reduces the amount of insecticide needed to destroy roaches, he explains. Only small amounts of sodium fluoride and pyrethrum are needed, thus helping conserve those scarce materials (BW—May 2'42, p64).



FOWLING PIECE

Using poultry for bullets to find out what happens when bird meets plane, technicians at the behest of the Civil Aeronautics Administration have perfected a "bird-proof" windshield. Told that birds might be responsible for many unexplained crashes, the experts designed a 20-foot air gun at Westing-

house's Pittsburgh laboratory and began stuffing chickens and turkeys into the breech after other missiles were found unsatisfactory for experiments. Birds were electrocuted and fired at high speeds into glass panels until one of tempered glass separated by an air space from an inside panel of glass and plastic was developed. It resists a turkey at 200 miles an hour.



regarding China and Japan

ticles that have made understandable the "Yankee" resourcefulness of the Chinese who transported whole factories thousands of miles on their backs to start a war industry far in the interior of China—articles that have shown the great, growing, democratic spirit of the Chinese as exemplified in soldiers who study the problems of government by candlelight in their trenches.

And China after the war?

The growing understanding of the Chinese by Americans is an important factor in our whole understanding of the war. For efforts are being made, by Axis propagandists, to split apart our united Psychological Front by making Americans feel that what happens in China has little bearing on our lives in the postwar world.

We need to understand that China is keeping some 1½ million Japanese troops desperately occupied. We need to understand the importance of hav-

ing friendly, sprawling China as a future base for operations against Japan. We need to understand the necessity of sending planes, tanks, trucks, big guns, and other lend-lease material to China. And, above all, we need to understand how important it is to encourage and hearten this valiant, democratic-minded people, so that, after the war is won, there will be in the Far East a great, human peace-loving democracy—the China which is now being born.

LIFE feels that if it can help implant this understanding in the minds of the twenty-odd million Americans who read it each week, it is helping strike one more blow for the all-important unity of the United Nations.

LIFE



LIFE introduces its readers to China's brilliant leader, Chiang Kai-shek, tells how he started with 2000 military school cadets when China was torn by a furious civil war and how, with the skill of genius, he leads a unified China today with 5,000,000 fighting men. Americans, despite barriers of space and language, become better allies by understanding this very socially minded leader who, incidentally, breakfasts on toast, fruit, and coffee, dresses immaculately, and goes to the Methodist Church.

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Eliminate unnecessary checking or proving . . . eliminate unessential reports or superfluous information on reports . . . obtain vital reports as a by-product of regular routines . . . combine or redesign forms so that related records can be posted together in one operation.

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Burroughs offers a wide variety of booklets and other printed matter, such as "Ways to Save Time in an Office"—"Adding Machine and Calculating Machine Short-Cuts"—operator training manuals—decimal equivalent tables—Victory Tax payroll deduction tables—unit value ration coupon tables—and many other helps to meet today's problems.

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The manufacture of aircraft equipment for the Army Air Forces, and the manufacture of Burroughs figuring and accounting equipment for the Army, Navy, U. S. Government and the nation's many war activities, are the vital tasks assigned to Burroughs in the Victory Program.

Feel free to call upon your local Burroughs representative, at any time, for up-to-the-minute information on how others are handling wartime problems similar to yours.

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★ MAKE YOUR DOLLARS FIGHT — BUY WAR BONDS ★

Speeding the Meat

Elimination of backhauls has been the packers' creed; meats habitually moved toward point of consumption.

Faster turnarounds and heavier loads per car have contributed importantly to the railroads' handling of wartime traffic. Generally recognized among traffic men and by the Office of Defense Transportation is the opportunity to make the rails still more useful by intensifying these reforms (BW—Feb. 6'43, p15).

• **Crosshaul Order Feared**—At the same time, one school of thought in ODT holds that the nation's railroad capacity can be given a major boost by limiting crosshauls and backhauls. This pressure may eventually bring an official order, and the possibility has a lot of industrial traffic managers worried because they fear that any major restriction would hamper their firms in serving and holding some good customers.

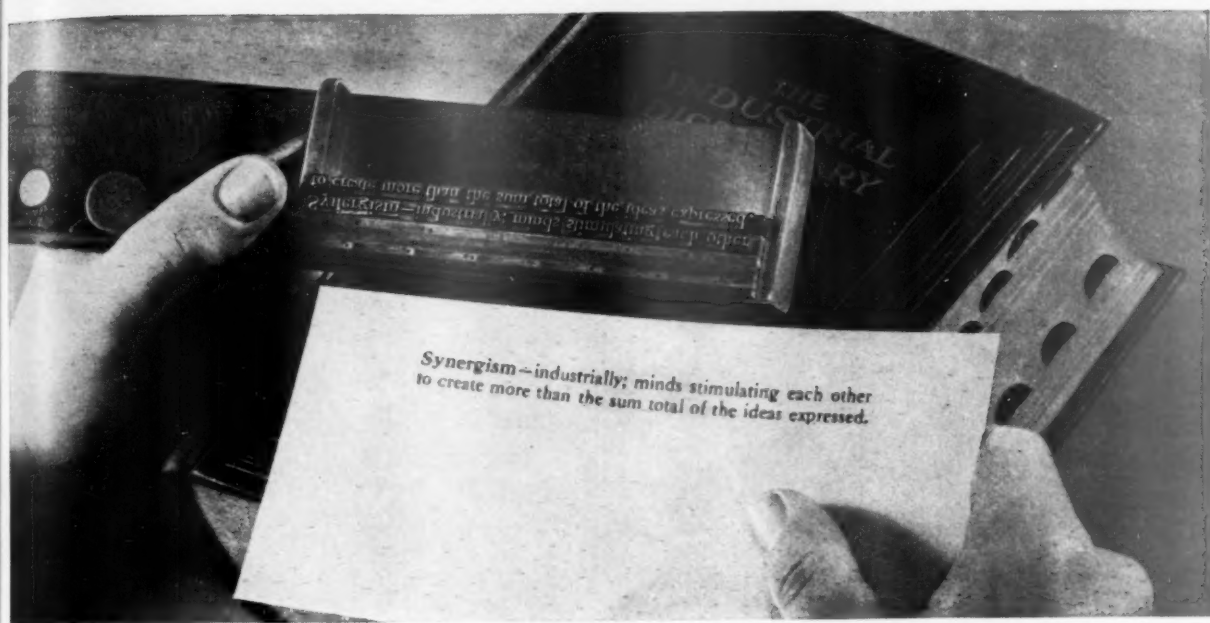
In the meat packing industry there is probably less than average worrying on this score because experience has shown that the handicaps to service are few and unimportant. The big packers habitually keep after the reduction of backhauls and crosshauls as a way to hold down shipping expense. Likewise they find an advantage in making meat shipments from those of their plants where livestock supply is greatest.

• **Toward Consumption**—Swift & Co., largest packer, has for more than 15 years enforced a rule that, with minor local exceptions or except in times of emergency, car-route shipments must move away from livestock supply toward point of consumption. This means, for example, that meat for consumption at Waukegan, Ill., comes not from Swift's Chicago plant 45 mi. to the south, but rather from St. Paul, 350 mi. to the northwest. Elgin, 40 mi. to the west of Chicago, is served direct from Omaha.

Swift's experience indicates that this practice need not hamper normal competitive service to customers. However, even in times when meat is plentiful, forehanded planning is necessary to get meat from the more distant source to the customer at the moment he needs it.

• **Rule of Necessity**—This no-backhaul rule arose in the supply of livestock and in the need for getting dressed meats into consumption while fresh. Roughly 70% of all U. S. meat is produced west of the Mississippi, and 70% is consumed east of the Mississippi. In general, livestock costs are lower in the West, and the western plants (except in Pacific states) have large tonnages

A New Definition



for the Industrial Dictionary

New ideas create new products, new methods, new words to describe them. And out of this war a word is emerging with a new meaning for future industrial progress—"Synergism."

War production has brought gigantic strides in industrial cooperation. Men have banded together to cooperate with a will-to-accomplish in a degree far greater than ever the world has known.

As minds meet to cooperate with the single purpose of accomplishment, they stimulate each other to create more than the sum total of the ideas expressed—"click to give a plus value" might be the slang for it. This is "Synergism."

Synergism is not a new word. It's an old word, with classic Greek roots meaning "working together." It long has had its meaning in

chemistry, in medicine, in theology. Basically, it has always meant forces working together to develop a whole greater than the sum of the parts.

And war accomplishment has re-introduced "Synergism" with a significant meaning for Industry. It provides a name for the factor that keeps working miracles in industrial progress.

We at Atlas have been practicing synergism in our spheres of chemical production to accomplish some outstanding results in collaboration with other companies. We think our minds will "click" with yours. Let us try the experiment.

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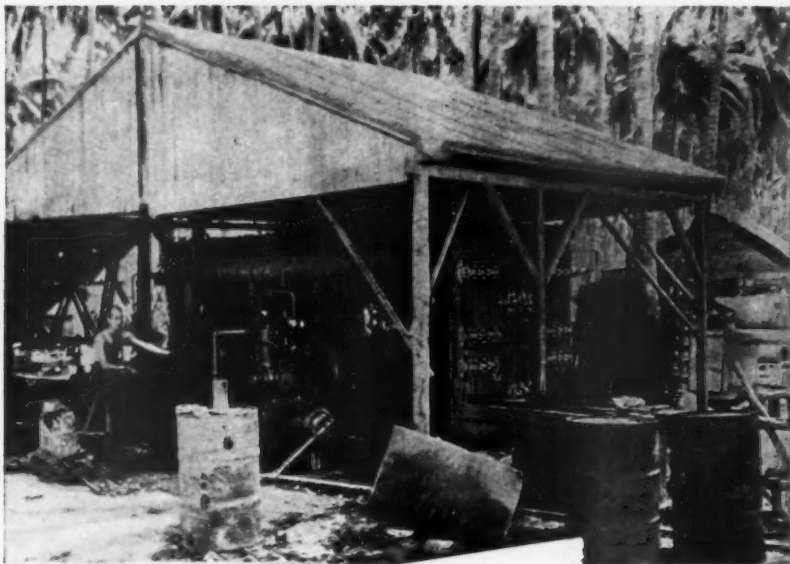
Coated Fabrics • Acids
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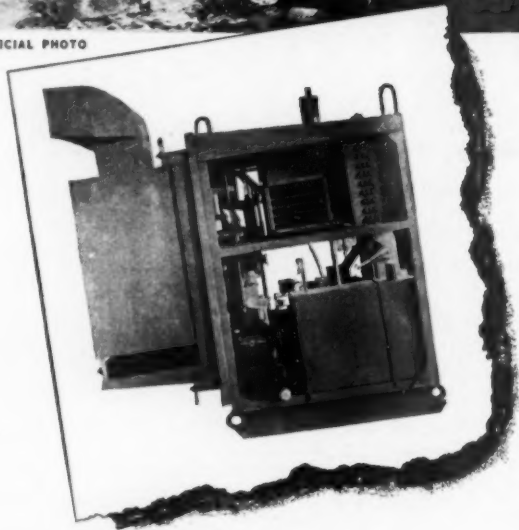
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Business Week • February 20, 1943

REFRIGERATION FOR RICE ?



U. S. MARINES OFFICIAL PHOTO



WHY KID ourselves that the Japs will be easily licked because they're underfed? The above-pictured field refrigeration system recently captured by U. S. Marines in the South Pacific is proof enough that Jap soldiers are getting more than a "handful of rice for rations."

But superiority of men and equipment is bringing Victory. Equipment-wise, for instance, the captured Jap job is a relic compared to Universal Cooler Refrigerating Units helping protect vital food supplies for our fighting men from Alaska to Africa. And from Universal Cooler's war-gear production lines flow additional tools of war to help provide superiority of equipment that spells the unconditional surrender of the Axis.

UNIVERSAL COOLER
WE SELL TO MANUFACTURERS ONLY

UNIVERSAL COOLER CORPORATION • Automatic Refrigeration since 1922
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of product above their local needs, while the eastern plants are less than self-sufficient.

The condition that prevailed before Swift undertook its campaign against backhauls was most apparent in middle western states just east of the river. For instance, pork from plants at Omaha and Des Moines was moving to Chicago, and cars of meat for points 50 or 100 miles west of Chicago were being shipped from Chicago. This increased the time between slaughter and consumption and tilted freight charges.

• **How it Works**—Eventually, car-route shipping practices were overhauled in the light of freight rates and train service. Good example is Illinois outside of Chicago which received roughly 85% of its total meat from Mississippi and Missouri river plants. Illinois is split into five areas served from five plants:

Area	Serving Plant
South	St. Louis
West	St. Joseph
North	St. Paul
Northern Strip (along one railroad)	Omaha
Northeast	Chicago

Meanwhile, the Chicago plant serves a territory to the east that includes points near Cleveland. Kansas City ships almost into St. Louis County, while the St. Louis plants ship south and southeast. The other plants along the rivers ship to the major consuming points on the Atlantic seaboard.

No More Beds

Hotel business sets new records as wartime traveling and military needs give rise to scramble for rooms.

"Sorry, we haven't any rooms. But you are welcome to sleep in the lobby." As comforting to hotel operators as it is distressing to travelers, this salutation is being intoned by room clerks in big cities throughout the land.

First picture brought to mind by mention of bulging hotels is Washington. The capital's new Statler opened on Jan. 29, adding 817 rooms to bring the town's total transient accommodations to almost 8,000. Though the Statler will be a big help, the congestion is still acute because recent hotel arrivals have been greater than ever. Guests lucky enough to connect with Statler beds were enthusiastic.

• **Unnecessary Travel Continues**—Much current hotel patronage comes from business men on war production missions and much from movements of the military. But a lot of it is just John and Mary visiting Aunt Hattie, a reminder that Americans are going to travel if



TIRES FOR TOMORROW

Anticipating the day when synthetic rubber tractor tires will be available to farmers, J. J. Newman (right), vice-president of the B. F. Goodrich Co., demonstrates an Ameripol tire to Emmett Blood, chairman of the local war board in Wichita.

they must do it on their hands and knees, and nothing Washington says is going to stop them.

Room shortages in some areas are intensified by Army commandeering of hotels. The Army has leased 500 hotels and bought 14, twelve of which are being turned into permanent hospitals. Most dramatic were the grab of snooty beach hostels in Florida and the War Dept. purchase of the 2,795-room Stevens Hotel, Chicago's \$26,000,000 white elephant (BW-Jan. 2'43, p18). Under Secretary of War Robert P. Patterson explained that the Stevens deal would save the government \$475,000 annual rental and restoration expense and added: "We paid \$6,000,000—less than we realized from the sale of furnishings. After the war we hope to sell it for \$3,000,000."

• **Hotel Business Soars**—Horwath & Horwath, New York hotel accountants, report that in December, the nation's hotel business increased 28% over the same month of 1941, the most heartening jump since early 1934 when repeal gave patronage a shot in the arm. Increase for the year 1942 was 15%. Best score was in room occupancy which soared to 73%.

For the past month the heaviest gain in total business was 50%—on the Pacific Coast. Next in order came Texas cities, Philadelphia, Detroit, Washing-

ton, Chicago. New York had only a 17% increase. Operators are celebrating the upsurge by increases in room rates.

• **Boom in Buyers**—As in other cities New York hotels have been on the upgrade for months and its percentage of room occupancy (78 in December) is just about at practical capacity. Reasons: (1) soldiers, sailors, and their friends in droves; (2) ditto defense workers; (3) fugitives from suburban gas rationing; (4) out-of-town buyers.

The buyers have stampeded to town to bid against each other on spring garments and other goods for gaping shelves. Show rooms are packed and clamorous; even drug buyers are on hand. December attendance of buyers is estimated to have been 66.6% ahead of last year.

Improvement in New York hotel business has brought out buyers for properties that banks and insurance companies have had to take over because of defaults on loans. In some cases the buyers are rich refugees from Europe. The inference is that these people are speculators who seek a profitable temporary use for idle capital and that they will unload when an advantageous turn-over is offered.

FAIR PROFIT WITHOUT FAIR

Many a county and state fair barely manages to break even nowadays; a profit is unusual. But in Dallas, Tex., the fair that wasn't there made \$14,641 last year. The 1942 state fair was called off on account of war conditions, but concessions and rentals accounted for a neat profit nevertheless.

The Texas exposition, billed as the nation's largest, has a 187-acre park at Dallas ideally situated for concessions and riding devices. Last summer concessions brought in \$25,638, the largest sum from this source in the fair's history. Other sources of income are the Cotton Bowl stadium and Fair Park Auditorium. The fair's biggest permanent tenant is the Farm Security Administration, which maintains regional offices in one of the huge barn-like structures.

In considering last year's report, state fair stockholders find only one fly in the ointment. Their net would have been even greater had not \$17,000 been spent in preparing for the 1942 fair before it was decided to call it off. When the fair is held the profit runs between \$80,000 and \$100,000.

Hog Island Ship Record Cut in Half

With American shipyards pledged to build 16,000,000 to 19,000,000 tons of merchant vessels this year (compared with 8,000,000 in 1942, with 1,000,000 in 1941, and with 1933's depression low of 10,771), new shipbuilding records are bound to be established almost every month.

Of the 746 ships launched last year by the industry's 525,000 employees, 542 were Liberty ships. Before the end of 1943 the shipyards are scheduled to launch merchant vessels at the rate of 5½ a day. How completely this record will eclipse that of Hog Island—production marvel of the first World War—already is demonstrated impressively.

Two West Coast yards have launched more bottoms in less than two years than slipped from Hog Island into Delaware Bay in five

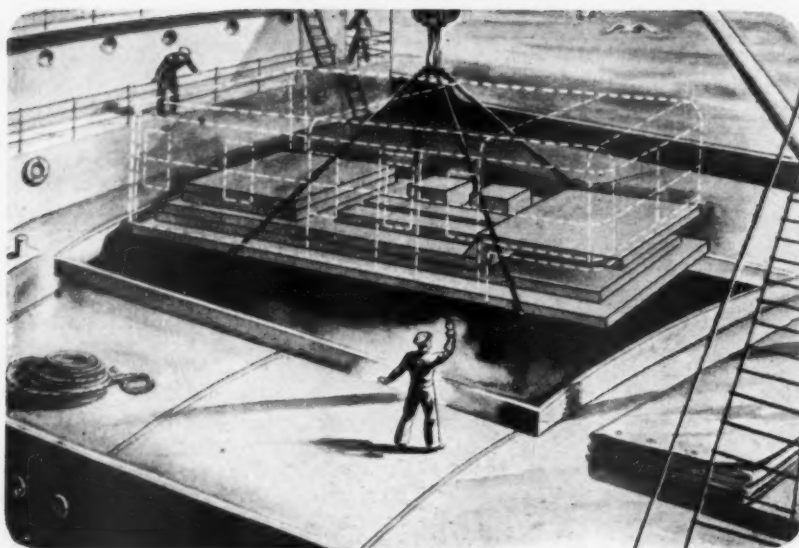
years. This comparison came into focus recently when California Shipbuilding Corp. (Calship) sent its 122nd Liberty ship down the ways at Wilmington, Calif.

The only mass production yard of the last war, Hog Island was begun on Sept. 13, 1917, laid its first keel Feb. 12, 1918, and delivered its first ship Dec. 3, 1918—almost two months after the Armistice. The 122nd and last ship was not launched until Jan. 29, 1921. Hog Island's best keel-to-delivery production record was seven months and 24 days, with the average somewhere between 10 and 12 months for each ship that was built.

Against this record, the Maritime Commission provides current statistics for the five yards that have produced the largest number of Liberty ships in the present war:

Yard	Contract Date	First Keel Laid	First Delivery	Total Delivered to Date	122nd Ship Delivered	Average Construction Time (Dec.) Days per Ship
Oregon Ship (1)...	3/14/41	5/19/41	1/27/42	131	1/18/43	33.7
Calship (2).....	3/14/41	5/24/41	2/21/42	129	1/28/43	49.4
Fairfield (3).....	3/14/41	4/30/41	12/30/41	85	43.3
Richmond No. 2 (4)	5/1/41	12/31/41	2/23/42	76	47
N. Carolina (5)....	3/14/41	5/22/41	2/17/42	64	47

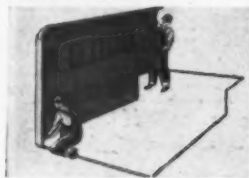
(1) Oregon Shipbuilding Corp., Portland, Ore. (2) California Shipbuilding Corp., Wilmington, Calif. (3) Bethlehem-Fairfield Shipyard, Inc., Baltimore, Md. (4) Permanente Metals Corp., Richmond Shipyard No. 2, Richmond, Calif. (5) North Carolina Shipbuilding Co., Wilmington, N. C.



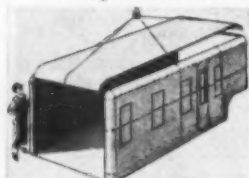
WHERE CARGO SPACE IS SCARCE—

that's where Lindsay Structure helps
get more combat bodies to the front

WHERE SPEED OF ASSEMBLY
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LINDSAY STRUCTURE AGAIN
"SAVES THE DAY"



No special tools



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● Lindsay Structure combat bodies can be shipped "k/d" in minimum space. That's a vitally important extra value of Lindsay Structure today when supply lines are thousands of miles long...and cargo space so urgently needed.

Completely prefabricated bodies can be knocked down, shipped flat, and reassembled quickly at their destination without sacrifice of strength or any of the other advantages of this method of construction!

Lindsay Structure combat bodies withstand the blistering heat of the desert... the humidity and termites of the jungles... the strain and wracking of operation over shell holes, rocks, and soft sand. They have the amazing strength to withstand the unusual burdens of service, and yet, because of the unique method of assembly, they actually save steel (over half a ton per unit in the case of the Canadian Army mobile workshop).

If you have problems of weight or strength or shipping space in connection with the essential housings, partitions, buildings, or combat bodies that you are building... investigate Lindsay Structure.

IMMEDIATE SERVICE ON YOUR PILOT JOBS. Phone or wire Lindsay and Lindsay, 222 W. Adams Street, Chicago, Ill.; or 60 E. 42nd St., New York, N. Y.

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U. S. Patents 2017629, 2263510, 2263511
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LINDSAY STRUCTURE CAN SAVE THOUSANDS OF TONS OF STEEL PER MONTH

38 • General News

Movie Tribunals

Future of arbitration system rests with Thurman Arnold's successor; 277 cases filed in two years.

Elevation of Thurman Arnold to the federal judiciary last week touched off a buzz of speculation in the movie industry about the future of the arbitration system (BW-Jan.25'41,p18) that keeps the exhibitors out of the distributors' hair, and vice versa.

● **Temporary Compromise**—The setup, operated by the American Arbitration Assn., was sired by the former trust-busting assistant attorney general as a temporary compromise in his antitrust suit to divorce the big Hollywood producers from their theater operations (BW-Nov.2'40,p15). His successor in the antitrust division of the Dept. of Justice must decide by Nov. 20 whether arbitration is achieving the purposes of the consent decree, by which Arnold agreed to call off his dogs for three years, and whether the term of the decree should be extended.

Only this month the Motion Picture Arbitration System, devised by the non-profit A.A.A., concluded its second year of existence. Upon the performance record of that period, the arbitration system will stand or fall in the eyes of Arnold's successor.

● **Panel of 1,200**—Independent of its nonmovie functions, A.A.A. set up 31 tribunals across the country. These it has staffed with paid clerks and a panel of 1,200 arbitrators, men of standing in the community, most of them lawyers, not a few jurists and educators, and a sprinkling of bar association presidents and former presidents.

The arbitrators are not paid in the sense that the \$10 per diem provided for them amounts to compensation. Many waive even this small honorarium. It is up to them to assess the costs of litigation, but the overhead expense (amounting to about \$300,000 a year) is borne pro rata by the five big producing companies that signed the consent decree—Paramount, Loew's (M-G-M), R-K-O, Warner Bros., and Twentieth Century-Fox.

● **Producers May Appeal**—Only exhibitors may initiate an original complaint, but the producers enjoy with them the privilege of appealing the local arbitrator's award to a three-man "supreme court" appointed by the New York federal court responsible for the consent decree.

At the close of the second year, exhibitors had filed 342 complaints, or demands for arbitration, but 65 of them were withdrawn before they reached an arbitrator, indicating some bargain had

Business Week • February 20, 1943

FIRE stops work . . . 1000 miles away!

THE HAZARD OF FIRE is a multiple threat to industry . . . and to the war effort. When it strikes it may destroy irreplaceable buildings, equipment and materials. It may paralyze production in the plant in which it occurs. But even more important, it may halt vital war production lines *miles away!*

Take the case of the stalled airplane assembly line . . .



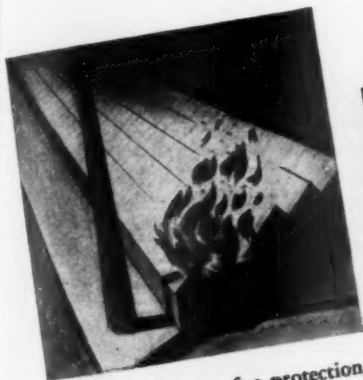
Plant A does not build airplanes, but it does make an essential precision bearing, part of a famous bomber.



GRINNELL AUTOMATIC SPRINKLERS

For Production Protection

Don't wait until it is too late. Call your nearby Grinnell office, or write to Grinnell Company, Inc., Executive Offices, Providence, R. I. Branch offices in principal cities.



Due to inadequate fire protection, Plant A burns, destroying the bearings in production as well as the machines to make them.



In Plant B miles away where planes are assembled, work comes to a standstill. Lack of bearings sabotages production as completely as Hitler himself would do it.



Don't risk damage or interruptions to vital war effort! Block fire the one sure way . . . by the system that controls fire at its source, automatically! By Grinnell Sprinkler Systems!

How Carpenter has widened the use for another metal...



This is the story of *Invar*—the 36% nickel alloy that expands only a tenth as much as carbon steel at temperatures up to 400° F. If your men have ever machined *Invar*, you are probably familiar with the tough machining problem they faced. As a matter of fact, designers and engineers who wanted the low expansion properties of this metal often avoided its use—because of the machining problems involved.

Then Carpenter research went to work, and now introduces an *Invar* that is more usable because it is actually easy to machine! *Carpenter Free-Cut Invar "36"* is the name of this new alloy that makes possible faster machining, saves tools and gives better finishes. The two bars above show a comparison between the regular *Invar* (left) and the new free-machining *Invar* (right). Notice the roughness of the threads and the jagged edges

of the hole drilled in the regular *Invar*. The drill had to be reground four times to put the hole through, and was completely burned out on the final attempt. The clean hole in the *Carpenter Free-Cut Invar "36"* at the right was made without any regrinding or injury to the drill.

So this month marks another "first" in Carpenter's development of fine steels. (Remember Carpenter's pioneering work on Stainless Steels, beginning with the invention of *Free-Machining Stainless Steel* in 1928?) It is that pioneering which is helping to get yesterday's "impossible" jobs done today. Let that service play a part in making your new products perform better and cost less. If your designers and engineers want practical help in the planning of new products or parts, ask them to get in touch with Carpenter's Metallurgical Department.

The Carpenter Steel Company, Reading, Pa.

Carpenter { High Nickel Alloys
Stainless Steels
Matched Tool Steels



Branches at—Chicago, Cleveland, Detroit, Hartford, St. Louis,
Indianapolis, New York, Philadelphia

been struck "out of court." Arbitrators made 173 awards, 99 favoring exhibitors and 74 favoring producers in their capacity as distributors. Only 65 appeals had been taken and all but 13 decided—30 in favor of exhibitors, 22 in favor of distributors.

● **Not the Whole Story**—This statistical record fails to tell the whole story. It does not take into account—and there is no record of—the beefs settled over a glass of beer without recourse to arbitration. The past record of discord in the land of make-believe makes it clear that these out-of-court settlements are accelerated by the Damoclean presence of arbitration as a last resort for the aggrieved exhibitor.

The chief point of friction between the exhibitor and the distributor (70% of complaints) is "clearance," the required time-lapse between the screening of a film at the so-called first-run house and its appearance at a second-run house, or between second and third run, etc. With understandable self-interest, the producing companies have made it a point to reserve first-run status for theaters with the best locations, usually their own; and they designate which of the remaining houses shall be second-run, which third, and which, in fact, shall get any run ("some run," in movie parlance).

● **Exhibitor Can Squawk**—Clearance may be anything from 24 hours up, depending on such variable elements as competition, accessibility of the theater, parking facilities, admission charge. Before arbitration, nothing much more than the conscience of the distributing producer influenced the clearance imposed on a given exhibitor. Now it is possible for the small exhibitor to rear up on his hind legs and yell blue murder, and achieve something in the bargain.

An example was the bleat of an exhibitor at Wheaton, Ill., that the big five producers subjected him to a six weeks' clearance after the Arcade Theater in St. Charles, Ill. The arbitrator slashed it to 24 hours. The producers, however, have appealed.

● **Clearance Cut 75%**—In another case, the owner of the Dickinson Theater at Mission, Kan., held to eight weeks' clearance after first run in Kansas City, won a 50% reduction from the arbitrator and still another 50% cut from the appeal board, winding up with a two-weeks' lapse after Kansas City first run.

Clearance grievances accounted for 196 of the 277 cases brought to trial in two years. Of those remaining, 34 involved a demand for "some run" and 15 for a "designated (i.e., first, second, third) run," while 32 were a combination of clearance and "some run."

● **Big Undertaking**—Since the consent decree views the motion picture industry somewhat as a public utility, the



"OVER HILL, OVER DALE, WE WILL RIDE THE IRON RAIL..."

Copyright 1943, The Pullman Co.

AS THE PULLMANS GO ROLLING ALONG

GROWING AND GOING—that's the story of our armed forces.

Growing every day. And going every night, for long distance troop movements are usually under cover of darkness, in Pullman sleeping cars.

It's a big job for the railroads to haul so many cars. And a big job for Pullman to provide them. But it's a welcome job to both of us, one we're proud and happy we were prepared to handle.

Prepared? Oh, yes. The way Pullman and the railroads worked together in peacetime—through the Pullman "pool" of sleeping cars—fitted right into the wartime picture.

Here's how that "pool" works:

► Railroad passenger traffic in different

parts of the country fluctuates with the season. Travel south, for instance, is heaviest in winter. And travel north increases in the summer.

► If each railroad owned and operated enough sleeping cars to handle its own peak loads, many of those cars would be idle most of the year.

► With the Pullman "pool," however, over one hundred different railroads share in the availability of a sleeping car fleet big enough to handle their combined requirements at any one time. As the travel load shifts north, south, east or west, these Pullman sleeping cars shift with it. They are seldom idle because when fewer cars are needed on one railroad, more are needed on another.

Now that war has come, this "pool" operation of sleeping cars enables troop trains to be made up on short notice—at widely scattered points—and routed over any combination of railroads.

That's what we meant when we said that Pullman and the railroads were prepared to handle the tremendous mass movement of troops that goes on constantly.

It takes a lot of sleeping cars to do it. Almost drains the Pullman "pool" at times. As a result, civilian travelers are sometimes inconvenienced.

But the war comes first with the railroads and first with Pullman—just as it comes first with you!

AN AVERAGE OF MORE THAN
25,000 TROOPS A NIGHT NOW—

GO PULLMAN

Buy War Bonds and
Stamps Regularly!

HEADQUARTERS

for Wartime Bag Closing Problems



IF you are confronted with increased production, manpower shortages, conversion from metal containers to bags—fabric or paper—or similar problems in your packing department, Union Special may have the answer. Union Special engineers have worked with hundreds of plants on just such problems. Union Special bag closing machines are available to produce strong sewed closures on paper or fabric bags of all sizes from 1 lb. to 100 lbs. or more.

Ask for literature describing typical machines and submit your requirements for recommendations.

Conserve Fabric Bags

With the Union Special bag patching machine, you can patch and repair fabric bags to greatly extend their useful life. Write today for full details on this efficient conservation unit.

UNION SPECIAL MACHINE COMPANY

408 N. Franklin St., Chicago, Ill.

World's Largest Exclusive Builder of
Industrial Sewing Machines



Union Special
FILLED BAG CLOSERS

distributor who elects to deny an exhibitor "some run" of pictures is undertaking an ambitious project, unless he is well fortified with proof that the exhibitor cannot, in the language of the decree, "satisfy reasonable minimum standards of theater operation."

One of the first cases brought to arbitration in 1941 pushed the "some run" terms of the decree to an early test. The owner of a theater in Nashua, N. H., had tried for almost three years to obtain some run of pictures, even to the extent of bringing suit under the Sherman Antitrust Act. On the eve of the creation of the arbitration tribunals, he gave up in disgust and disposed of the property to his theater manager.

• **Quick Action**—The manager had better luck. In the second week of February, he filed a demand for arbitration. A hearing was scheduled for Mar. 14. Before the hearing, one of the distributors caved in and gave him a run. And when the arbitrator opened the hearing, the other distributors joined in the flight.

The arbitration setup, which will expire next Nov. 20 unless renewed, is not the only provision of the consent decree due for scrutiny by Thurman Arnold's successor. Block-booking and blind-selling of film features were curbed drastically. For a term that expired last September, distributors were forbidden to sell in blocks of more than five films, and then only after the features were trade-shown. The industry, upon expiration of the term, suggested enlarging the block to twelve, but Arnold turned thumbs down and directed instead a year of free competi-

tion. The practical effect of this has been a continuation of the five-feature block by four of the five producers and introduction of a block of ten by the fifth.

VITAMIN FEEDING PAYS

A glass of lemonade and a vitamin cookie can accomplish wonders for worker efficiency. West Coast employers were willing to concede as much when they scanned the results of a lemonade-and-cookie experiment conducted by Dr. Henry C. Borsook among the 700 employees of a Los Angeles war plant.

The midafternoon pick-me-up supplemented a hot meal served at noon by a catering company. At the end of one month, management of the plant reported that this frontal attack on nutrition deficiency had cut absenteeism (BW-Feb. 6 '43, p34) and tardiness, reduced colds and other energy-sapping ills, and was especially beneficial to men and women working under strain.

A year ago, Dr. Borsook, California Institute of Technology scientist, checked the diets of 1,200 Los Angeles war workers, found more than half of them deficient in vitamins (BW-Apr. 18 '42, p73). A recent recheck of the same group showed an even greater deficiency.

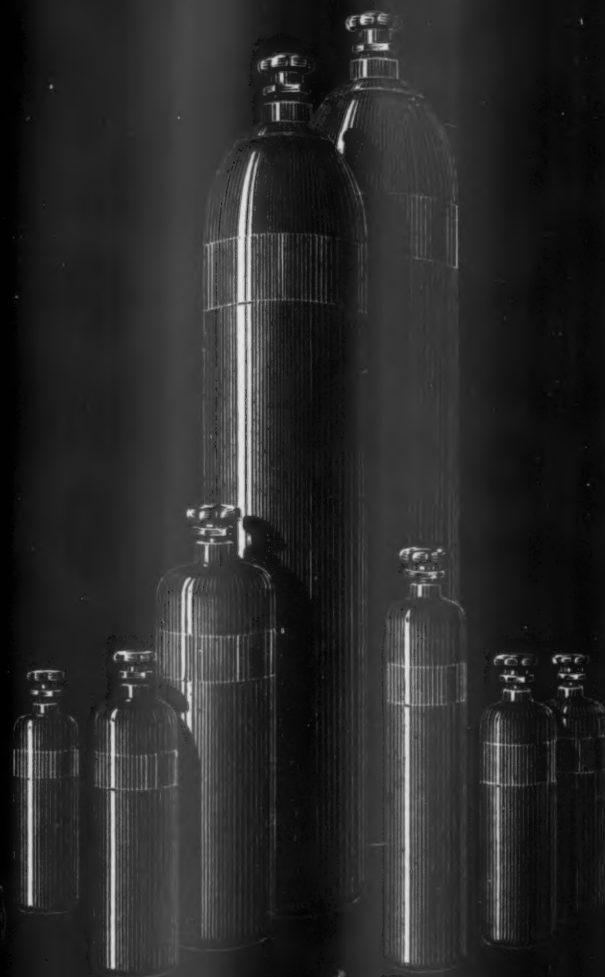
Addressing Los Angeles employers last week, Dr. Borsook urged adoption of the British plan requiring every factory employing 250 or more to provide one hot meal daily in ration-free commissaries. And he warned that management should maintain control over menus and prices if the restaurant concession is given a caterer.



MOTOR SHOW

Playing to empty bleachers, a real Army show packs the race track and buildings of the Richmond (Va.) fair grounds. When travel restrictions fore-

told a loss, the city called off the fair (for the first time in 37 years) and canceled the lease with the fair association. Now Army motor service units use the buildings for repair shops, the grounds for motor storage.



Meet the Family

"Baby" is no bigger than your little finger. "Daddy" is nearly five feet tall.

There are all sizes and shapes in this remarkable family... fat ones, thin ones... light ones, heavy ones.

* * *

These are high-pressure cylinders for holding gases and liquids. One member of the family helped save the life of Eddie Rickenbacker by inflating his rubber raft. Others provide oxygen for stratosphere flyers. Still others put out fires.

* * *

Today high pressure gases are being put to work in hundreds of interesting ways. An outstanding pioneer in this field, Walter Kidde & Company is constantly developing new types of valves, cylinders, and containers to meet the expanding needs of our wartime industry.

Due to increased production, we can promptly fill orders for Kidde pressure cylinders.

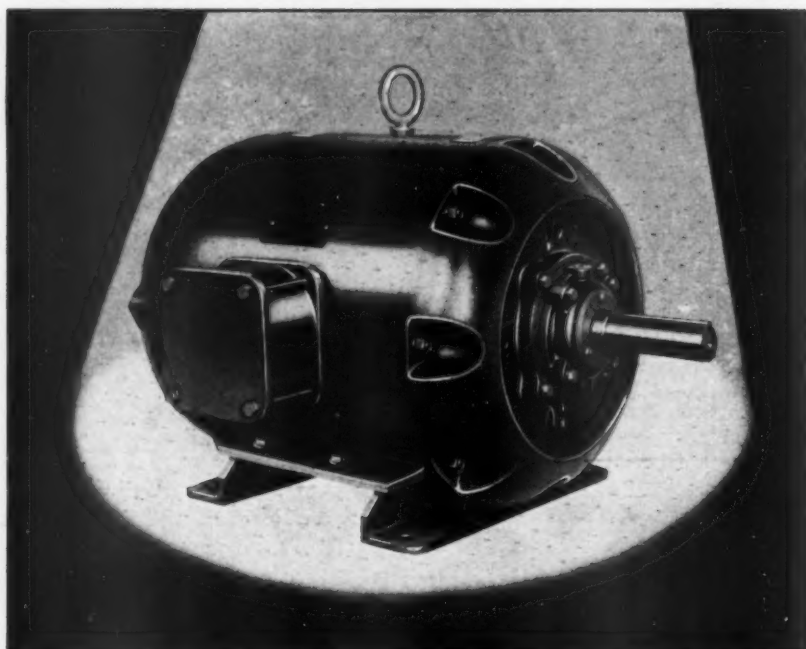
* * *

After the war, high pressure gases will play an important part in the more efficient, more productive industry of the future. Perhaps *now* is the time to get in touch with our research and development department. Write: Walter Kidde & Company, 224 West Street, Bloomfield, N. J.



PROTECTS LIVES

Kidde
HIGH PRESSURE GASES • FIRE PROTECTION



In time of war and in time of peace

Wagner

P R O D U C T S

reflect sound engineering

and modern manufacturing methods

The skill and facilities Wagner has gained in 52 years of manufacturing quality electric motors—and years of producing quality transformers, fans and industrial hydraulic braking systems—are now being used to speed up Victory.

Wagner motors are built in a wide range of types and sizes with electrical and mechanical characteristics varied to meet specific jobs. However, each motor, like all other Wagner products, is alike in its ability to produce dependable performance.

If you need motors, or other products made by Wagner, consult the nearest of Wagner's 29 branch offices, located in principal cities and manned by trained field engineers.

FOR VICTORY—BUY U. S. WAR BONDS and STAMPS

E43-4

Wagner Electric Corporation

ESTABLISHED 1891

6460 Plymouth Avenue, St. Louis, Mo., U. S. A.

ELECTRICAL AND AUTOMOTIVE PRODUCTS

Piping Cost Cut

Forced circulation in hot-water heating system permits 30% reduction in weight of metal for pipe and radiation.

Two years of intensive study have indicated to manufacturers of hot-water heating systems that American homes can be heated with 30% less weight in piping and radiation surface and with no increase in the amount of fuel required, provided only that adequate forced circulation is installed to speed hot water through the piping and the radiators.

• **Multiple Savings**—Application of results of the study is expected to reduce (1) the use of heating materials, (2) over-all cost of homes, (3) engineering costs involved in planning a heating system, and (4) installation cost. A model home in Urbana, Ill., was the laboratory for the research, conducted by the University of Illinois engineering experiment station for the Institute of Boiler & Radiator Manufacturers.

The smaller heating main used in the reduced system has made it possible to eliminate many special fittings. This makes it possible to place the main nearer the basement ceiling, increasing headroom. University engineers believe a still further reduction in piping and radiator weight may be found practicable.

• **Water vs. Steam**—Although institute members also manufacture steam radiation systems, hot water was chosen for the tests because members contend that its adaptability to lower temperatures is



FLYERS' IGLOO

Far cry from World War tents are cozy lightweight shelters of plywood and quilted glass fiber insulation being made by the James Manufacturing Co., Fort Atkinson, Wis., for Arctic airmen. Heated economically by gas-line stoves, the fireproof shelters can be freighted by air and quickly set up.

History Repeats . . . The Bronze Age

Tremendous demand for copper and its alloys in making vital war materials bans civilian use of the precious red metal for the duration.

Haya, mate of Harth the Mighty, was annoyed when she awoke that morning some thousands of years ago. Crouched on his haunches at the mouth of the crude shelter, her spouse was industriously pounding the family utensils and ornaments into weapons. If he bothered to explain at all, Harth grunted that the tribe was at WAR . . . that household use of the gleaming metal was out for the duration.



. . . cooking pot into sword

And this year of war, 1943, found many a U. S. housewife in a similar dither. She wanted brass fixtures for the bathroom, copper gutters, flashing and bronze screens. But America was at war—vic-

tory was dependent on copper alloys for the machines and munitions of war. For home building the vital metal was out—until men again laid down their arms.

Supply . . . and Demand

America produces a great part of the world's copper, also a large percentage of the world's brass, an alloy of copper and zinc. Largest fabricator in the field is The American Brass Company, with six U.S.A. plants, one Canadian.

As a result of research started over a century ago, and continuing today, the industry has developed a thousand uses for copper and its alloys. American life is safer, more comfortable, convenient and attractive because copper has properties unmatched by other metals. Copper alloys don't rust, they take a handsome polish, are more easily fabricated into desired shapes, adaptable to more purposes.

In peacetime, the output of copper is ample to supply the ever-increasing demands of industry. But war as it is fought today, requires the entire peacetime output, plus many millions of additional pounds.

Where it Goes

Hundreds of thousands of pounds of Anaconda Copper and Brass are turned out every day by American Brass Company workers for making shell cases alone. Imagine the amount needed for

just calibre .50 machine gun cartridges, which may spew from the modern fighter plane at the rate of 3,500 per minute . . . and for the huge steel projectiles fired from heavy artillery and battleship guns, each of which requires a copper or copper alloy rotating band to give the projectile the spin that insures accuracy in flight.

Transportation

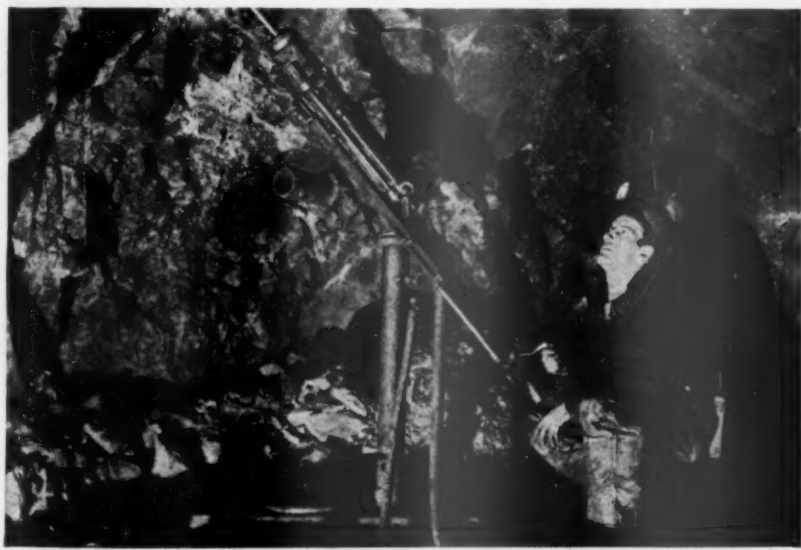
Copper and its alloys produced by The American Brass Company are vital too, in the field of transport. In the railroad industry, for example—an electric locomotive may contain 75,000 pounds of the red metal. Trucks, jeeps, tanks, ships, planes—every vehicle of transport that man's ingenuity has produced depends on copper.

First Front

The American Brass Company workers were among the first to receive the coveted Navy "E" Pennant for five of the Company's plants, thus carrying on a tradition of production efficiency associated with Connecticut Valley people since Colonial times. Today, they are proudly flying the joint Army-Navy "E" Pennant for outstanding production. Employees know that 100% of their output of Anaconda Copper and Brass is being used to defeat the Axis. This great army of workers . . . with their more than 3,300 former fellow employees now in armed services . . . comprises an important contribution to the Nation's fighting strength.




. . . one of five at American Brass



Wanted: Copper Scrap

As the tempo of war swiftly rises, the nation appeals to the public for scrap copper and brass. As in the production of steel, scrap copper is important in the production of new metal. Mining capacity alone cannot meet the nation's expanded wartime needs. Scrap must make up the deficit. Inducement to citizens who think it isn't worthwhile to turn in the small quantity of scrap copper and brass they have on hand: relatively, a single pound of copper scrap is as important as 45 pounds of steel in prosecuting the war effort. Cooperate with the local salvage committee.

Published in the interest of a better informed war effort by

THE AMERICAN BRASS COMPANY 

General Offices: Waterbury, Connecticut • Subsidiary of Anaconda Copper Mining Company

Men work like beavers down in MAINE



THAT'S just one of the things that have drawn so many mills and factories to Maine locations—and held them there.

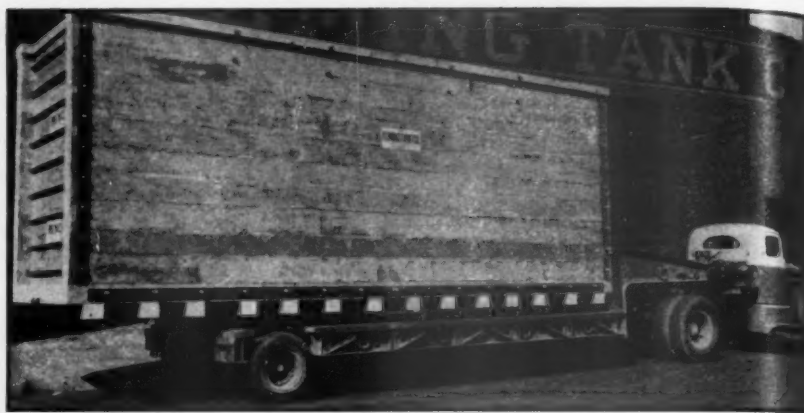
Workmen in the Pine Tree State are loyal to management. They put their hearts and their heads into the day's work. Good old down-East ingenuity and integrity make a big difference in the volume and quality of work done.

Are you looking for new and better plant sites? In addition to good labor conditions, you will find in Maine ample water power, rich natural resources, fast transportation by rail or road to the heart of the Eastern market and a very favorable tax set-up. These things give you a combination of profit-producing factors matched nowhere else.

Perhaps you remember Maine as a fisherman's paradise. Rediscover this land of promise, NOW, by writing for our free book, "Industrial Maine." It gives you facts you need. Address the Maine Development Commission, Room 2-B, State House, Augusta, Maine.



Write for this FREE BOOK



OUT OF THE WOODS

Byproduct of the metal shortage is the wooden tank, once again being used extensively in the industrial field

—this time in the form of a tank trailer. Made by the Fleming Tank Co., Pittsburgh, the tanks will not corrode or scale, can be serviced by carpenters, and require less paint.

causing it to replace steam, which requires high temperatures to function at all.

The size of the main leaving the boiler is reduced from a nominal pipe size of 1½ in. to ¾ in., while that of the remainder of the piping is cut to ½ in. from various sizes ranging up to 1½ in. Radiators are cut 15% to 40%. The heart of the installation is a one-pipe forced circulation system. The model home was built with removable inside wall sections, thus facilitating the shifting of radiators and changing of pipes.

Members of the institute are Burnham Boiler Corp., Columbia Radiator Co., Crane Co., Kohler Co., Eastern Foundry Co., International Heater Co., National Radiator Co., H. B. Smith Co., Inc., Spencer Heater Division, Thatcher Furnace Co., U. S. Radiator Corp., Utica Radiator Corp., and Weil-McLain Co.

Home Food Drier

A cheap and simple food dehydrator soon will be made available to all. Household model proves efficient.

New dehydrating equipment developed by agricultural and chemical experts may hold an answer to war's shortages of materials and labor in food preservation. After months of experiment, the University of Tennessee is promoting as a public service a simple, effective home dehydrator (BW—Jan. 16'43,p20) and the most advanced technique for its use.

• **Clearing the Hurdles**—Two major problems faced researchers when they set out to meet a mushrooming demand

for information on the ancient art of dehydration. First, was the black eye dried foods suffered during the World War, when inefficient methods resulted in tough, ill-flavored (and often ill-smelling) products. Then, there was also the question of producing equipment that would be simple to operate and low in cost.

Dr. G. A. Shuey, head of the university chemistry department, and his staff tackled methods of dehydrating while agricultural engineer P. D. Rodgers of the Tennessee Valley Authority started blueprinting equipment. Result of Rodgers's midnight oil-burning is a small dehydrator for the home use of farmers, victory gardeners, and housewives who ordinarily stock pantries with jars of summer produce. A farm model has a capacity of 25 lb. of fruits or vegetables; a small unit for city dwellers holds 10 lb.

• **Easy to Build**—The dehydrator is made almost entirely of noncritical materials. Encased in a wooden cabinet, it operates on 1,000 watts of electricity—five 200-watt Mazda light bulbs providing heat, an ordinary electric fan circulating air to dissipate moisture. It would be possible for a mass producer to add later such embellishments as smart cabinets and thermostatic controls.

So simple is the design and operation of the equipment that many a home mechanic could build one in a few hours with about fifteen dollars worth of materials. Operating from a standard electrical outlet and requiring the space of a console radio (the smaller model fits a kitchen table), the drier can be used in any kitchen.

• **No Patent Restrictions**—Meanwhile, the university is disseminating dehydrating techniques for both commercial and home use through its Agricultural Experiment Station. A special school for educational and research workers



CONSOLIDATED LIBERATOR

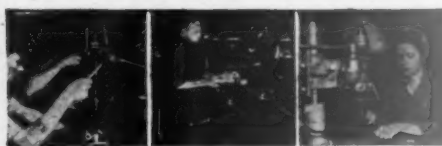
Life savers made in the U. S. A.

EVERY American plane turned out ahead of schedule is a life saver! Rohr production fighters who perform the highly specialized tasks of precision parts manufacture and vital assemblies, know this full well. That's why they maintain Rohr output at a pace to give our great pilots **more planes faster . . .** a pace to shorten the war and save American lives.



ROHR

PARTS ☆ ASSEMBLIES



Rohr-equipped planes are fighting, bombing, cargoing their way to a quicker Allied victory!



HELPING TO WRITE THE STORY OF TOMORROW

Rohr Aircraft Corporation, Chula Vista, California



This fish helps flyers see in the dark

EARLY in the war RAF night fighters proved that Vitamin A sharpens the night vision of flyers deficient in this vitamin.

Up to this time, imported cod and halibut oils had supplied most of this country's Vitamin A, but soon after we discovered *shark livers* a far richer source. Result: Shark livers jumped from 35c a pound to \$9.20 and the fish oil industry on the Pacific Coast boomed.

Today, billions of units of Vitamin A are going to British and U. S. flyers—thanks in part to the Northern Pacific Railway. Each month this railway delivers to Eastern pharmaceutical houses vital shipments of 50-gallon drums of shark liver oil, each drum valued up to \$5,000.

Doing jobs like this—jobs that bring Victory daily nearer—has earned this railway the nationwide reputation—"Main Street of the Northwest"!



"MAIN STREET OF THE NORTHWEST"



is in operation and pilot plants are producing in Georgia and Tennessee to test methods that may be used by converted canneries.

Neither Dr. Shuey's techniques nor the Rodgers equipment will be restricted by patents, and one of the nation's No. 1 retailers is reportedly eyeing production and merchandising possibilities of the dehydrator.

• **Bulletin Available Soon**—Early next month the university will publish a bulletin, detailing instructions for building and operating the dehydrator and information on food processing for drying. Copies of that bulletin will be sent free in response to requests addressed to Dr. G. A. Shuey (in care of the University of Tennessee, Knoxville, Tenn.).

Flaxseed to Eat?

Linseed oil may get top billing as a substitute for dwindling supplies of edible vegetable fats.

Everybody knows that in a few months edible fats are likely to be even scarcer than they are now. Looking ahead, American food processors are considering linseed oil a possible substitute or supplement for the old standby vegetable oils derived from cottonseed, soybeans, and corn.

• **Linseed Limit Seen**—Many trade authorities feel sure that civilian use of linseed oil, now restricted to 70% of 1940-41 average consumption, will be cut still further. Some are even guessing that its use may be limited to edible and military purposes, depending on lend-lease requirements. Such oil technology leaders as Otto Eisenschiml of the Scientific Oil Compounding Co., Inc., feel certain that either Americans or the recipients of lend-lease will be eating much processed linseed before the war ends.

Meanwhile, laboratories of food processors (Swift and Armour included) admit that linseed oil figures in experiments to find substitute or supplementary edible fats. Deodorizing and hydrogenating methods are being worked out to make linseed oil acceptable to fastidious American tastes. In shortening, say these chemists, linseed oil could pass muster because it's consumed indirectly. But for direct consumption as margarine, they're doubtful.

• **Popular in Europe**—Europeans are not so finicky. Belgians, Germans, and Dutch have eaten and relished linseed oil for decades—particularly whenever it dropped a cent or two below soybean oil. Currently, heavy shipments of linseed oil are being lend-leased to Russia for use either in margarine form or without benefit of hydrogenation. (Although



**Untrained workers
need this warning:**

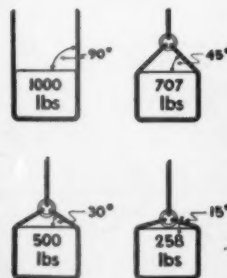
"CAREFUL!"
—LIVES DEPEND
ON YOU"

WITH millions of new people working today, the question of safety takes top rank on the home front. Observe how many more persons were killed and injured while working than in the fighting between Pearl Harbor and December 7 last:

"ON-THE-JOB" ACCIDENTS	U. S. ARMED FORCES
Dead.....19,000	Dead..... 8,192
Injured..... 1,700,000	Wounded & Missing 50,115
TOTAL 1,719,000	TOTAL 58,307



**NATIONAL SAFETY COUNCIL
SHOWS HOW ANGLE OF SLING
ALTERS ITS SAFE LOAD CAPACITY**



In Business for Your Safety

AMERICAN CHAIN & CABLE COMPANY, Inc.

BRIDGEPORT, CONNECTICUT In Canada—Dominion Chain Company, Ltd. • In England—The Parsons Chain Company, Ltd., and British Wire Products, Ltd.
Aircraft Controls, American Chain, American Cable Wire Rope, Campbell Cutting Machines, Ford Chain Blocks, Hazard Wire Rope, Manley
Garage Equipment, Owen Springs, Page Fence and Welding Wire, Reading Castings, Reading-Pratt & Cady Valves, Wright Hoists and Cranes



LET'S FIGURE OUT A FILTER for the Plane* you've got on paper

OR PLANT, OR MACHINE

One thing is tough about making as many different kinds of air filters as we do. And that's knowing who is going to use an Air-Maze next, where and for what.

It's our job to see that you get cleaned air wherever you want it. And as much of it as you need. Sometimes that calls for "beforehand" engineering. Like fitting a double-curved, bifurcated filter in a plane—a plane so streamlined that the pilot can't shift his chewing gum to the other side of his mouth.

Designing and building filters to fit new ideas is a job Air-Maze is particularly able to do well. Been doing it for nearly 20 years. Write for information on the type in which you are interested.

Maybe there's an idea for you in these typical Air-Maze uses

War Planes, Tanks, Ships—cleaning engine intake air.

Radios, Telephones—keeping delicate equipment dust-free.

Ship Galleys—trapping grease and dirt.

Precision Production—removing dust problem.

Photography—improving camera and process results.

AFTER THE WAR—Your new home, plane or production machine will be better with an Air-Maze filter.



Aircraft Engine Filter
One of over 3,000 types

AIR-MAZE CORPORATION • CLEVELAND, OHIO



Russia grows a good deal of flax of her own, most of it is harvested before the seed matures in order to get the best quality of fiber for linen.)

Linseed has never been classed as an edible oil in this country, chiefly because it is our only domestically produced drying oil except the relatively new tung (BW—Nov. 15 '41, p. 42). We rarely have produced enough for our own paint and varnish industries, but have relied on Argentina for almost half our requirements (BW—May 23 '42, p. 45).

• **A Gap to Fill**—Other reasons for not using linseed oil for food are that it has a sharp taste and odor which are very disagreeable to uninitiated palates, and it turns rancid rapidly. While these difficulties can be overcome by additional refining, up to now it has never been worthwhile because there were plenty of more suitable fats. But with cottonseed, corn, and soybean oil producers going at capacity and still unable to supply wartime demands, linseed oil may be drafted.

Even before the possibility of eating it arose, linseed oil had come into its own (BW—Nov. 29 '41, p. 42) when other drying oils became unobtainable. Tung oil imports from China are out, and even the record-breaking domestic crop of 8,000,000 lb. in 1942 doesn't begin to fill a normal yearly demand of 50,000,000 or 60,000,000 lb. Oiticica, our second drying oil, is a stockpile item because boats can't be spared to bring it from Brazil. Dehydrated castor oil, also from Brazil, is in the same fix.

• **Production Increased 500%**—As a result of government encouragement in the form of loans that guarantee the farmer \$2.70 a bushel, our annual average production of flaxseed has jumped from about 8,000,000 bu. in prewar days to 40,660,000 bu. in 1942. At the rate of 2½ gal. of oil from each bushel of flaxseed, this crop will yield more than 100,000,000 gal. of oil.

Although linseed is practically the only vegetable oil not under price ceiling (to encourage flaxseed production), the price has not kept pace with the tremendously increased demand. Industries consuming linseed oil are operating under ceilings, and the restrictions have affected manufacturing levels.

• **The Price Situation**—From the 1941 average of 9¢ to 10¢ a lb. in tank cars at Chicago, the linseed oil price has increased to about 13¢ now. Most of this increase has occurred within the past few weeks, and it is generally regarded as a result of pressure now being exerted to put a ceiling on linseed meal, residue from oil crushing. This would placate dairy farmers, who use the meal for cattlefeed, but the price of oil probably will jump to enable crushers to profit. Still higher prices are a cinch if the government raises the floor on flaxseed to \$3 a bushel, as it may do before planting time if farmers appear apathetic.

Wanted

YOUR IDLE STRAPPING TOOLS ...FOR VITAL WAR NEEDS

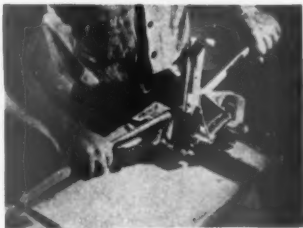
STRAP-APPLYING tools are needed at once . . . to assure safe arrival of war material at our far-flung fighting fronts.

Without these tools (essential to proper strap application) . . . ammunition, food and equipment may be damaged in transit and rendered useless . . . at a time when every pound of war product is sorely needed.

Without steel strap protection, the resulting damage may nullify

production gains . . . may cause irreplaceable losses of man-hours and materials.

Production of Acme strap-applying tools has been increased to the limit . . . new speed records have been set . . . Yet, demands of the armed services and war plants . . . combined with the limited supply of critical materials from which tools are made . . . have taxed the tool manufacturing capacity of the strapping industry.



HERE'S HOW YOU CAN HELP

Loan us your unemployed strapping tools until such time as you will again need them . . . when they will be replaced. Or, if you prefer, you will receive a cash credit now based on the current return value. Should you have idle strapping tools

other than Acme, write the manufacturer. He, too, will very likely be glad to know of your willingness to co-operate in this all-out effort.

**FILL IN BELOW TO ENLIST
YOUR IDLE STRAPPING TOOLS
FOR WAR WORK**

ACME
Steelstrap PROCESS
ACME STEEL COMPANY

Atlanta • Baltimore • Boston • Chicago • Detroit • Indianapolis
Los Angeles • Milwaukee • New Orleans • New York • Philadelphia
Pittsburgh • Portland, Ore. • St. Louis • St. Paul • San Francisco
Seattle • also representatives in other principal cities
ACME STEEL CO. OF CANADA, LTD., Montreal, Toronto, Winnipeg, Vancouver

ACME STEEL COMPANY
2828 Archer Avenue, Chicago, Illinois

We are returning the following Acme strap-applying tools:

- ☐ These tools are loaned to you until we require their return.
- OR
- ☐ These tools are returned for credit based on current return value.

Name _____

Company _____

Address _____



STOP THESE HIDDEN LEAKS THAT WASTE YOUR DOLLARS...

Hundreds of Plants Effect Big Savings with **Carey** HEAT INSULATIONS

Many industrial plants have hidden profit leaks in the form of waste in production, or excessive overhead. While these leaks may be small in themselves, they may add up to a very costly total.

Heat loss, through inadequately insulated pipe, is one of the most common of these hidden profit leaks. Scientific tests show, and hundreds of installations prove, that from 70% to 98% of this loss may be saved by correct insulation.

Fortunately for industry, there is a practical way, not only to find these wastes, but also to eliminate them. The Carey organization is equipped to help you uncover the profit leaks in your plant. A phone call or letter to our nearest branch, will bring a representative. Catalog "Heat Insulation for Industry" mailed on request to Dept. 29.

One pair of bare, 10-inch flanges at 350° F., waste one ton of coal per year. One foot of bare, 10" steam pipe, heated to 700° F., can cost you heavy heat loss. Figuring steam cost at 30c per million B. T. U., insulation 3" thick, shows an annual saving of \$24.76 per foot of pipe.

INDUSTRIAL BUILDING PRODUCTS OF ASPHALT — ASBESTOS — MAGNESIA

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WATERPROOFING MATERIALS...EXPANSION JOINT...ASBESTOS PAPER AND MILLBOARD



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Psychology Pays

Detroit company applies it profitably in pretesting women for war jobs, and in a careful followup program.

The N. A. Woodworth Co., in Detroit's outskirts, builds precision parts, mainly for armament use. A comparatively new company, one of its primary problems, as output multiplied, has been obtaining help that, if not competent at once, soon would be.

• **Results Show Value**—The means employed have been a series of psychological, mechanical aptitude and emotional tests. Through these examinations, Woodworth (with its payroll already 60% women) has definitely improved on average factory experience in place-

CONTRADICTIONS OF WAR

When Economic Stabilizer Byrnes announced his 48-hour work-week, it collided head on with the state's rights and rulings of tiny Rhode Island. The Byrnes order affects service industries as well as those in war production. It was applied to 32 critical war centers immediately, presumably will include a second list of communities within six months and a third list after six months (page 14).

Since Jan. 20, Rhode Island business concerns and industries not engaged in war production have been on a five-day, 40-hour week. The restriction was applied by Governor J. Howard McGrath to save fuel. Retail establishments including barrooms and liquor stores close on Mondays. Financial institutions, excepting brokerage offices, close Saturdays which is a legal holiday during the fuel emergency. Wholesalers may close Saturday or Monday. Exemptions are made for hotels, restaurants, drug stores, outlets handling perishables, fuel distributors, and others whose activities can't be so strictly controlled.

There is as yet no clash between the government's 48-hour week and the state's 40-hour week because no R. I. city is in Mr. Byrnes's first 32 war areas. But Newport is listed among those cities where the 48-hour ruling may apply within six months, and Providence is in the third or after-six-months group. The prospect is just one more war worry for business executives in those two cities.

TRAFFIC SLASHED

Gasoline rationing has virtually halved the amount of traffic borne by the nation's highways. A checkup of December traffic by the Public Roads Administration of the Federal Works Agency shows an over-all reduction of 48% from December, 1941.

Probably the reduction in use of passenger autos is even greater, for a count on the Pennsylvania Turnpike showed that while truck and bus traffic was off only 9%, autos were off more than 70%—as they were at the Fleetwood viaduct in Westchester County, New York. Other toll facilities suffered an average 35% drop in traffic, as compared with 9% in November.

Traffic decline was fairly uniform through the 43 states where "electric-eye" recorders were set up. In the previously rationed Atlantic seaboard area, the decline was 48.9%; in the area that fell under rationing Dec. 1, it was 47.6%. It was noticeable, however, that traffic on local highways dropped only 35%, indicating that long trips accounted for the major reduction.

A sharp inclination upon the part of motorists in the states rationed as of Dec. 1 to stock up in advance of the drought was noted in reports of gasoline tax collections, which dropped an average of only 1.3%. By contrast, the loss in the previously rationed area averaged 29%.

ment of inexperienced employees, in quit rates, and perhaps in spoilage totals. The proof comes every time a rush of requisitions for workers forces temporary drops in standards.

An interviewer meets each applicant and fills out a form including data on family history, health, education, work background, and social activities. About one out of five applicants is requested to appear for job tests, given at least four times a day. In these tests a maximum of 18 persons fills out three basic blanks during a timed 90-minute period, one to develop an I. Q. rating, one to establish emotional stability, the third to rate mechanical, typing, or clerical ability.

• **I. Q. and P. R.**—The I. Q. test is a standard type devised for use in high schools and colleges. The personality record test, measuring emotional stability, is a yes-or-no questionnaire, tabulations of whose 55 answers establish a P. R. rating, not dissimilar to that of the Humm-Wadsworth Temperament Scale used on the West Coast (BW—Nov. 2 '40, p. 40). Questions determining the



If Bucephalus, here, could talk, he would tell you that the Campbell Trace Chains he's wearing were made by International. ★ ★ But he doesn't know that International also makes chain for every regular need; industrial, marine, tire, as well as farm. ★ ★ Nor does he know that International is prepared to counsel with your engineers on jobs involving unusual chain problems. ★ ★ When you need chain, get in touch with International. We cordially invite your inquiry. *International Chain & Mfg. Co., York, Pa.*

↑ INTERNATIONAL CHAIN ↓

P.R. rating include some whose significance cannot be analyzed by the applicant ("Are you slow in making up your mind?") as well as some obvious ones like, "Do you usually look ahead and plan your work?" The applicants invariably and unhesitatingly answer this one "yes."

Shop work applicants also fill out a mechanical ability rating blank, devised to establish proficiency in tracing, copying, locating, mechanical analysis, and other shop-necessary attributes. Would-be clerical and stenographic employees take fairly standard types of examinations in proficiency, tinged strongly with a psychological approach.

One personnel department woman

gives these tests; two others score them. From 50% to 70% of those taking the tests "pass" high enough to be called to work.

• **Passing Marks**—All applicants accepted for shop work must be within a specified range of emotional stability; intelligence and mechanical aptitude requirements vary with the jobs assigned. Tool inspection, for example, requires the highest I. Q. rating of any in the plant and also the highest mechanical aptitude. Routine volume production work can utilize a comparatively low I. Q. rating and also a definitely low degree of mechanical aptitude; the same I. Q. holds for lapping work, but mechanical aptitude must be higher. A

bottom point in aptitude is specified in racking jobs, but I. Q. there must be a shade higher than for some heat treating work.

The personalized and psychology-conditioned handling of personnel selection continues after hiring. A counselor interviews new women employees by groups at the start of their work, gives them an "initiation talk," takes notes on the personality and background of each, invites them to come back as work or personal problems may arise.

• **Followup Job**—Watching over new employees during the training period and thereafter are "personnel supervisors," four on each shift, to answer questions, try to spot and check developing difficulties. They have no supervisory duties; are simply on hand as human safety valves, against emotional, physical, or mental hazards which tend to impair the efficiency of employees.

Two weeks after a new employee goes on the payroll her record is checked by the personnel supervisor, the foreman, and the personnel office. Department, production, absenteeism are studied. Some are then released. Similar checkup follows in another fortnight. If this "screening" is passed, the employee goes on the seniority list. But every six months the record comes out again for review.



VENEZUELA HIKES ANTE

Venezuela is going to rewrite its oil law to provide for (1) larger royalties on a number of old contracts, and (2) higher taxes on unexploited oil concessions (BW—Feb. 6'43, p7).

Details now available indicate that the Venezuelans are asking for minimum royalties of 16½% on all crude oil. Present royalties range upward from 7% and average 11%. And on oil concessions that have not yet been worked, Caracas threatens to boost the tax rate from five bolivares to 30 bolivares a hectare.

Standard Oil of New Jersey, Royal Dutch Shell, and Gulf Oil, respectively, produced 51%, 38%, and 10% of 1941 output. In Caracas and Washington it is indicated that the companies have discussed the new terms with Venezuelan officials and have tacitly agreed not to contest them or to abandon operations.

Because Colombia, the other great producer in the Caribbean area, is known to be considering similar tax legislation, the Venezuelan deal is likely to become a model for any other Latin-American contracts that may be written. It is clear now in oil circles and in most Latin-American capitals that both the oil interests and the governments are eager to avoid the expropriation carried out in Mexico.



HOMEWORK

The economic relations between Roger Fardis and the Pullman-Standard Car Mfg. Co., Hammond, Ind. undergo a decided change every day—whenever Fardis punches the time clock, in or out. By day, Fardis is a war-working machinist at Pullman-Standard; after hours he becomes a subcontractor who furnishes his day-time employer with precision-machined trunnion pins for howitzers. Daily, as Fardis leaves Pullman-Standard plant, he loads the trunk of his sedan with steel blanks and hauls them to what was once the family garage. For helpers, Fardis has his neighbor, 71-year old Ivan Carlson, and his sons, Emil and Roy, who are both workers in war plants. Mrs. Roy Carlson keeps the firm's books.

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Previewing a new U.S. fighter "at 40,000 feet"

YOU ARE IN ANOTHER WORLD in that blue-black sky 40,000 feet above sea level. It's bitter cold up there, sometimes as much as 102° below zero.

And the air is so thin, human beings exposed to it are like fish out of water . . . they lose consciousness in one minute, die in five, if oxygen isn't supplied artificially.

Aircraft engines, instruments and controls are much like the human body in this respect. They, too, don't act the same at extreme high altitudes as they do near sea level, and so operation that is satisfactory at low levels often turns out a failure in the stratosphere. This is why Stratolab tests of the engine and other parts of a new-design U.S. fighter are vitally important.

In the AiResearch Stratolab pictured above, the new plane's performance is

checked at sea level under stratospheric pressures and temperatures. The entire fuselage of the fighter plane, engine and all, is put into this mighty test room.

Thus our forces are given an on-the-ground "preview" of how the airplane will act at altitudes of 15,000, 25,000 and even 40,000 feet. And only the U.S. Army, no other manufacturer of aircraft or parts, has a vacuum chamber

that approaches the AiResearch Stratolab in size and testing capacity.

Our Stratolab is now enlisted for the duration in the services of the U. S. Army and Navy . . . once peace comes again there will be quite different air-conditioned and air-cooled devices being tested here, miraculous new devices that will help to make your everyday life easier and more pleasant.



"Where Controlled Air Does The Job" • Automatic Exit Flap Control Systems • Engine Coolant Systems
Engine Oil Cooling Systems • Engine Air Intercoolers • Supercharger Aftercooling Systems

...QUARTER-CENTURY Prefabricating experience



Working NOW FOR
U.S.

BUT LATER FOR YOU!

For more than a quarter-century we have specialized in the industrial-housing field; we were in the vanguard, too, in establishing the validity of the prefabrication principle.

Now—we are in full production, serving industry in its war requirements . . . After VICTORY, we'll be on the alert to serve again civilian needs.

BUY A HOME IN THE PEACE TO FOLLOW
—WITH THE BONDS YOU BUY TODAY

HOUSTON Ranch-Cut HOUSE CO.
25 years Prefabricating Houses
HOUSTON, TEXAS

**This Atlas
Talks...
the Business
Man's
Language!**

● It's the needed link between Sales Executives and the Field. Shows how to overcome difficulties caused by gasoline rationing and war-time travel restrictions. Prevents wasteful efforts in planning salesmen's routes. Gives quick survey of new territory to be worked and old territory to be reworked. Shows railroads for every County in every State. Highways also shown for bus and auto travel. Nothing like it . . .

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is the first and only Atlas giving all the details relating to each State in a section by itself—and arranged in just the manner that business men have wanted.

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WAR BUSINESS CHECKLIST

A digest of new federal rules and regulations affecting priorities and allocations, price control, and transportation.

Sheet Steel

WPB has ordered galvanized sheet steel production concentrated to eliminate any possible interference with production of steel plate and heavy hot rolled sheets. This means that, while the total production of galvanized sheets will not be decreased, all of the output will be allocated to a few producers, and the rolling facilities of several leading galvanized sheet manufacturers will be released for plates and heavy hot rolled sheets which are needed urgently in the war program.

Chrome Steel

At least a certain minimum percentage of the chromium content of stainless steel must come from scrap and chrome ore. The minimum ranges from 30% to 40%, depending on the carbon content of the steel. (Order M-21-a, as amended.)

Zinc

Zinc deliveries are limited to orders bearing ratings of AA-5, or higher, under a tightened zinc conservation order issued by WPB. Other changes place remelt zinc under the same controls that apply to higher grades and restrict shipment and use of zinc scrap. (Order M-11, as amended.)

Tungsten

Amendment of the conservation order affecting tungsten eliminates several exemptions contained in the original order. Among these are the exemption for orders rated A-1-j, or higher, and the general exemption in favor of articles using tungsten to comply with safety regulations. (Order M-29-b, as amended.)

Lard

All federally inspected meat packers are required to set aside 50% of each week's lard output for the Food Distribution Administration. If any part of this lard remains unpurchased by FDA 60 days after the end of the week it was produced, it is automatically released for civilian consumption. Packers not subject to federal inspection are not affected by the order. (Food Distribution Order 20.)

Utility Rates

No increase in utility rates can be made without prior notice to OPA, even if it is made as a result of an automatic adjustment clause based on increased taxes, fuel costs, or similar items. (Interpretation of OPA Procedural Regulation 11.)

"Selling Unit" Defined

Manufacturers and chain wholesalers who operate more than one sales establishment under a central pricing office may

now consider all such establishments as a single "selling unit" under terms of GMPR. Retailers, however, must still determine and report prices separately for cash sales establishment. (Amendment 43 to GMPR.)

Farm Machinery

Purchase orders for welding rods and electrodes may receive ratings up to AA-1, when they are to be used in repairing farm machinery and equipment. Such ratings may not be used for orders worth more than \$25.

Electric Motors

WPB has set up compulsory simplification practices for electric motor controllers, designed to save at least 12,000 tons of carbon steel, 1,500 tons of copper, and 75 tons of stainless steel, in addition to smaller quantities of other vital metals. (Order L-250.)

Rural Electrification

To expedite construction of short extensions of rural electricity distribution lines already authorized (BW—Jan. 23 '43,



LIGHT MILE

Piercing a mile of darkness, Westinghouse lighting division's new hand light gun, designed for guiding air traffic when radio transmitters are silent, sends out a white 500,000-candlepower beam with the flip of a trigger. An extra pull turns the light stream either green or red.

MORE FOOD



AMERICA needs and is getting more food than ever before. More food—and food of better quality. By the scientific use of plant foods—potash, phosphate and fertilizer—our farmers are producing, with less labor, the largest crops in the nation's history. From International's potash mines in New Mexico and phosphate rock mines in Florida and Tennessee come the essential ingredients for the manufacture of fertilizer. And at more than twenty plants, International

manufactures several hundred thousand tons of complete fertilizer each year for a wide variety of food crops. International is proud to contribute so importantly to the farmer's achievement in producing record-breaking crops of the high quality food so urgently needed for our workers at home and for our fighting forces throughout the world. *International Minerals & Chemical Corporation, General Offices: 20 North Wacker Drive, Chicago.*

International **MINERALS AND CHEMICALS**

Mining and Manufacturing

PHOSPHATE · POTASH · FERTILIZER · CHEMICALS

HOW TO convert plants and produce more and better war goods

HERE IS YOUR KEY to the problems of getting war production contracts, converting quickly and effectively to war production, and meeting wartime requirements for faster, better output. It brings you practical information in tips on threading the complexities of conversion and procurement, check lists of things to do and not to do, pointers on relationships with the government, and fundamentals, methods, and suggestions in profusion, for planning and controlling production, improving operations, and bringing your plant to the efficiency required.



HANDBOOK OF WAR PRODUCTION

By EDWIN ARTHUR BOYAN

Research Associate, Department of Business and Engineering Administration, Massachusetts Institute of Technology.

368 pages, 6 x 9, price only \$3.00

THIS handbook shows how to get best results in problems specifically associated with the war effort—arranging contracts, subcontracting, procuring materials and supplies, estimating, converting the plant, etc. It also covers planning and control, labor, inspection, salvage, industrial accounting, and other production factors ordinarily important to the manufacturing enterprise, giving the pointers and methods especially vital under wartime conditions and requirements.

Gives such practical helps as:

- over-all approach and technique to follow in the maze of contacts and relationships that must be developed in contract procurement
- pointers on determining nature of government requirements, how to handle bids, reasons for failure to get contracts, etc.
- major steps to be taken in conversion
- concise treatment of work simplification, including lists of 300 questions that indicate points for improving processes and operations
- duties of a priorities division; place in the organization; simple technique for follow-up of promises by supplier
- pointers on handling supervisory training, training on the job, and personnel policies
- how to determine what and how much inspection is necessary
- suggestions for cooperating with government inspectors
- how to set up and operate practical salvage systems
- example of careful and rapid bid development method, etc., etc.

Based on tested methods

Valuable information secured in direct contacts with numbers of successful war production plants is here organized and presented in a form to give you a quick view of the fundamental problems—the techniques of approaching them, getting information specific to your own plant and making use of it—and many practical methods for direct application.

ERWIN H. SCHELL says in the Foreword: "It is a working tool which the manufacturer may put to immediate use when undertaking production for the nation."

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McGraw-Hill Book Co., 330 W. 42nd St., N. Y. C. Send me Boyan's Handbook of War Production for 10 days' examination on approval. In 10 days I will send \$3.00, plus few cents postage, or return book postpaid. (Postage paid on cash orders.)

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Position

Company BW-1-16-43



The Aircraft Accessories Corp. Burbank, Calif.
Airesearch Mfg. Co. Los Angeles, Calif.
American Sterilizer Co. Erie, Pa.
The F. H. Bickford Co. Dayton, Ohio
The Brecon Loading Co. Talladega, Ala.
The Brookside Mills Knoxville, Tenn.
Caterpillar Tractor Co. East Peoria, Ill.
Cities Service Defense Corp. Little Rock, Ark.
Clark Bros., Co., Inc. Olean, N. Y.
Colonial Radio Co. Buffalo, N. Y.
Columbia Steel & Shafting Co. Carnegie, Pa.
Dictaphone Corp. Bridgeport, Conn.
Faichney Instrument Corp. Watertown, N. Y.
Farnsworth Television & Radio Corp. Marion, Ind.
International Harvester Co. (Two plants)
LaPlant Choate Co. Cedar Rapids, Iowa
Lone Star Defense Corp. Texarkana, Tex.
The Lucas Machine Tool Co. Cleveland, Ohio
Magna Mfg. Co., Inc. (Two plants)

Mahoney-Troast Construction Co. Wood-Ridge, N. J.
Metlab Co. Philadelphia, Pa.
Mohawk Carpet Mills, Inc. Amsterdam, N. Y.
National Biscuit Co. New York, N. Y.
The National Tool Co. Cleveland, Ohio
Packard Mfg. Corp. Indianapolis, Ind.
Philadelphia Textile Finishers, Inc. Philadelphia, Pa.
Pittsburgh Steel Co. (Two divisions)
Saco Lowell Shops Biddeford, Me.
St. Croix Garment Corp. Stillwater, Minn.
The Stanley Works (Two divisions)
United-Carr Fastener Corp. Cambridge, Mass.
Universal Camera Corp. New York, N. Y.
Edward Weck & Co., Inc. Brooklyn, N. Y.
William Whitman Co. Lawrence, Mass.
Wright Aeronautical Corp. Wood-Ridge, N. J.

Maritime Commission M Awards

Bethlehem-Sparrows Point Shipyard, Inc. Baltimore, Md.
Dri-Steam Products Co., Inc. New York, N. Y.
Edward Valve & Mfg. Co., Inc. East Chicago, Ind.
Edwards & Co., Inc. Norwalk, Conn.
Federal Shipbuilding & Dry Dock Co. Kearny, N. J.
Fort Pitt Steel Casting Co. McKeesport, Pa.
Hesse-Ersted Iron Works Portland, Ore.
Iron Fireman Mfg. Co. Portland, Ore.
Jenkins Brothers Bridgeport, Conn.
Kelvin & Wilfrid O. White Co. Boston, Mass.
Lewis Bolt & Nut Co. Minneapolis, Minn.
Mine Safety Appliance Co. Pittsburgh, Pa.
National Tile & Marble Co. New York, N. Y.
Paxton-Mitchell Co. Omaha, Neb.
Radiomarine Corp. of America New York, N. Y.

W. & J. Sloane Co. New York, N. Y.
Sterling Casting Foundry Braddock, Pa.
Stevens Sash & Door Co. San Antonio, Tex.
Summer Iron Works Everett, Wash.
Sun Shipbuilding & Dry Dock Co. Chester, Pa.
L. Thiess & Sons Corp. Maspeth, N. Y.
Turl Iron & Car Co., Inc. Newburgh, N. Y.
Union Steam Pump Co. Battle Creek, Mich.

(Names of winners of the Army-Navy and Maritime Commission awards for excellence in production announced prior to this new list will be found in previous issues of Business Week.)

p53), WPB has released a small amount of frozen copper wire for immediate use on urgent projects. The order originally specified that extensions must use steel wire which, though allocated, is not yet available. (Order P-46-c, as amended.)

Antifreeze

Effective date for price ceilings on certain "deleterious" antifreeze preparations, the output of which has been banned by WPB (BW—Feb. 6 '43, p62; Jan. 30 '43, p59), has been postponed until Mar. 15 to allow wholesalers and retailers time "to dispose of their stocks on hand." (Amendment 3 to Regulation 170.)

Butter

OPA now has specific dollar-and-cents ceilings on butter at every stage of distribution from the creamery to its purchase by neighborhood grocers. Retail stores will

continue to compute their ceilings by adding specified markups over net cost under Regulation 268, but sales to consumers by retail route sellers and by creameries are covered by the new order. (Amendment 4 to Regulation 289.)

Other Priority Actions

Order M-283 prohibits shipments of asbestos textiles, except on WPB authorization. . . . Yellow poplar logs, lumber, and veneers are placed under allocation control by order M-279. . . . Order L-30-a, as amended, revokes restrictions on manufacturers' sales of metal pails, buckets, and tubs for civilian use, and increases allowed use of steel in their manufacture from 10% to 50% of base year consumption. . . . Order L-251 limits to 136 the number of types of paint brushes and other similar brushes that may be made, compared with over 800 now being made. . . . Order M-217, as amended, places several addi-

POINT RATIONING FACTS FOR RETAILERS

All retail sales of food to be placed under point rationing are banned from Feb. 21 through Feb. 28, inclusive. During this period retailers may buy any amount of rationed foods their wholesalers are able to supply. However, in order to avoid maldistribution of the available supply, they are urged not to overstock.

During the month of March, sales to consumers may be made in exchange for point ration stamps. Retailers may use these stamps at will for restocking. At the close of business Mar. 31, retailers must take an inventory of stocks of rationed goods on the shelves, in terms of their point value.

Between Apr. 1 and Apr. 10 retailers must register with OPA, stating the total point value of sales during March and of inventory on Mar. 31. Allowable inventory will be computed by multiplying total March sales by a fixed stock-sales ratio figure which has not yet been announced. If actual Mar. 31 inventory was less than this allowable amount, OPA will issue an additional purchase certificate; if it was greater, the retailer must turn over to OPA point coupons equal to the excess.

tional restrictions on shoe production. . . . Order M-284 imposes strict control over processing and sales of flax. . . . Use of certain jewel bearings in precision instruments is further restricted by Order M-50, as amended. . . . Higher ratings for repair, maintenance, and operation materials for processors of eggs and dairy products, and fruit, vegetable, and fish packers are provided in amendments to Orders P-118 and P-115, respectively.

Other Price Actions

War model locks and lock sets are put under dollar-and-cents ceilings at the manufacturer and jobber levels by Regulation 317. . . . Amendment 66 to Revised Schedule 88 broadens application of the base-period reference price to include all tank wagon sellers of gasoline and heating oils. . . . Ceilings reflecting Oct., 1941, markups over current cost are placed on shellac varnish by Amendment 109 to Supplementary Regulation 14. . . . Ceilings on rayon tops, noils, and producers' waste are sharply reduced by Regulations 325 and 90, replacing Revised Schedule 90. . . . Ceilings on blended wool yarns spun other than by the woolen or worsted system are revised downward by Amendment 12 to Revised Schedule 58. . . . Peanut prices will be supported at not less than 85% of parity, and, in addition, incentive payments of \$30 an acre will be made for acreage between 90% and 110% of assigned goals. . . . Amendment 52 to Supplementary Regulation 1 and Amendment 105 to Supplementary Regulation 14 put ceilings on unfinished grape, berry, and fruit wines at the same level as the finished product.

Business Week • February 20, 1943

TO PUT
MORE

Battle Power
UP FRONT!



PUT all your power into the job now, to put more *battle power* up front! Throughout your plant's "power lanes" . . . wherever wheels and shafts turn to produce power for production . . . install Dodge mechanical power transmission units.

Rugged Dodge-Timken bearings consistently deliver 50,000,000 revolutions without re-lubrication . . . 30,000 hours of operation under conditions for which they are adapted. They arrive at your plant completely assembled, pre-lubricated and adjusted, ready to slip onto the shaft. They have what it takes to withstand shock loads . . . to survive the bombardment bearings get in war production. They are protected against dust, abrasives, abnormal heat, water.

D-V Sheaves and D-V Belts are teamed

up for top speed, low maintenance, long life. They need less attention . . . you save manpower as well as horsepower. And now, in addition to steel sheaves, Dodge offers new matched-quality Victory Wood Sheaves . . . so you can further conserve metal.

You can depend on Dodge for "The Right Drive for Every Job" . . . countless combinations of individual drive, multi-motor or group drive equipment . . . to put all the power into the drive and conserve motors, critical materials and manpower . . . to get every minute of hard-hitting, high speed, around-the-clock war production.

You can depend on Dodge Distributors for local stocks, in checking performance, extending equipment life, modernizing power transmission methods.

DODGE MANUFACTURING CORPORATION, Mishawaka, Indiana, U.S.A.

DODGE
MISHAWAKA

Throw All
Your Scrap
Into the Fight



THE RIGHT DRIVE FOR EVERY JOB

Mining—Number One War Industry

*The mineral products of the earth are the
prime necessities of war...and peace*

THE SURFACE of the earth provided primitive man with the things he needed for his meager existence but civilization really began when he became curious about its interior. This curiosity has brought us a long way. For the earth has yielded — out of its deep recesses — all the raw materials of modern industry. And today, in the grueling race of production, our mining industry is providing the raw materials upon which depends our survival. Our mines and quarries must supply a long list of materials without which a successful war cannot be fought.

Take steel, for example. War without steel is inconceivable. Steel starts with iron ore, limestone and coke. These are products of mines and quarries. It takes power and heat to get these materials out of the ground, to refine them and to transport them to the point where processing begins. All the subsequent operations culminating in the steel ingot, shape or plate, and in moving the final product to the point of use require power and heat.

The major source of this power and heat is coal.

Production of a ton of steel, it has been stated, requires two tons of coal. Smelting of the pig iron alone, 60,000,000 tons in 1942, required the coking of some 75,000,000 tons of coal. Pig output is expected to rise to 68,000,000-70,000,000 tons in 1943, carrying coal consumption up to 85,000,000 tons. At the same time, output of steel ingots is expected to rise from 87,000,000 to 97,000,000 tons. Think what this means in terms of power and heat.

Another vital metal is copper. Modern armies need copper. This point is dramatically illustrated in a recent memorandum by Robert P. Patterson, Under Secretary of War, in announcing the release of 4,000 men from military service to return to the mines and increase copper production. "In a single minute of combat", Mr. Patterson declared, "a flight of 50 fighter planes shoots away 7 tons of copper. A 37-mm. anti-aircraft gun uses up a ton of copper every twenty minutes it is in operation. Six hundred pounds of copper go into every

medium tank, and a ton into the engines and air-frame of a Flying Fortress. The Signal Corps alone needs 5,000 tons of copper every month for radio and telegraphic and telephonic equipment. An army without copper would be an army without speed, maneuverability or firepower. It would not last a day in battle".

Seven tons of copper for one minute of combat by 50 fighter planes means from 200 to 700 tons of ore, depending upon its grade. Small wonder that the War Department was willing to release drafted miners from military duties to produce more copper.

But other metals are equally important in war: tungsten, nickel, manganese, chromium, vanadium and molybdenum for alloy steels; zinc for brass and die castings; tin for bronze and bearings; aluminum and magnesium for aircraft; lead and mercury for ammunition; silver for electrical equipment, bearings and solder, and so on. Even relatively insignificant non-metallics, like mica and diamonds, suddenly assume critical importance.

And let us not lose sight of the fact that without adequate energy, i.e., heat and power, production, processing, transportation and the relative comforts to which we have become accustomed would be impossible under war conditions. Coal is the major source of energy in the United States. It supplies more than half the total in normal years.

The railroads of the country alone used 110,000,000 tons in 1942 to move freight and passengers and service their facilities. Utilities consumed over 68,000,000 tons in the production of electric power. Over 135,000,000 tons of coal were consumed last year in maintaining the level of heating comfort necessary for the maintenance of efficiency and morale. The consumption, this year, will be even greater.

In short, the mineral products of the earth are the prime necessities of war.

The nations that control the world's mineral resources and make the most efficient use of them will win the victory.

Before the war, the British Empire and the United States together controlled probably 75 per cent of the world's mineral production. This would have been a most potent weapon in the United Nations' arsenal if the whole strategy of Axis expansion had not been influenced by mineral objectives. Addressing the American Zinc Institute on the subject last April, E. W. Pehrson, of the U. S. Bureau of Mines, estimated that the Axis had improved its position in world mineral resources in the following percentages: iron ore, from 6 to 46; steel production capacity, 20 to 34; petroleum, 1 to 7; coal, 27 to 53; copper, 5 to 10; lead, 7 to 22; zinc, 16 to 27; tin, 1 to 72; manganese, 2 to 30; chrome, 3 to 30; tungsten, 6 to 60. In the light metals, areas now Axis-controlled produced in 1940 54 per cent of the world's aluminum, 49 per cent of the bauxite (the principal source of aluminum) and two-thirds of the magnesium.

Despite these gains, the industrial war power of the United Nations still can outweigh that of the Axis by a considerable margin. It already has begun to surpass it. The problem is to convert quickly our potential mineral resources into implements of war. In this conversion, a heavy burden of responsibility has been placed on the mining industry of the United States as the largest producer of many metals, minerals and fuels. In fact, the United States mining industry began to go on a war basis a year before Pearl Harbor. The curves of demand for domestic copper, lead, zinc and other metals began to rise sharply in 1940, and were paralleled by a rising coal production.

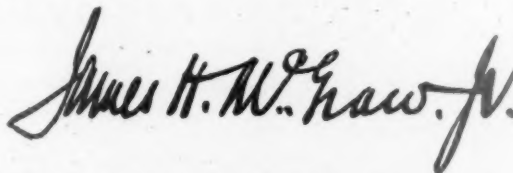
How well the job has been done cannot be revealed in accurate figures in many cases because of censorship. In metals, however, some idea of production gains can be indicated in comparative terms. United States copper production, for example, is breaking all previous records. Aluminum capacity will be more than seven times its annual peace-time average. Magnesium plants now building will have a capacity 100 times the largest yearly

before-the-war figure. Molybdenum, of which the United States has the largest single mine in the world, is being made available in record quantity. Zinc, lead and mercury are surpassing expectations in meeting wartime demands, and tungsten, chromium, manganese, antimony and iron and steel are being turned out in record-breaking quantities.

Bituminous coal production in 1942 was 580,000,000 tons, the greatest in history, valued at more than \$1,300,000,000 at the mine. Some 430,000 or more men were employed in 1942 and received at least \$750,000,000 in wages. Bituminous production in 1939 was 394,855,000 tons, while the output for 1943 is forecast at approximately 600,000,000 tons — another new United States record. The 1942 anthracite output was 59,961,000 tons, valued at over \$270,000,000 at the mine. The industry employed some 85,000 men and paid out at least \$180,000,000 in wages. The 1939 production of anthracite was 51,487,000 tons, and the forecast for 1943 is

65,000,000 tons or more.

Marshalling the Western Hemisphere's mineral resources, the United Nations have been the beneficiaries of the diversified resources of two continents — in particular of Canada's nickel and coal, Mexico's lead and antimony, Chile's copper, Bolivia's tin, Peru's vanadium, Brazil's iron, and Venezuela's petroleum. With other United Nations contributing their share of metals and fuel, the grand total is an impressive array of potential munitions and matériel to lend assurance of certain victory over the Axis. Sheer weight of metal, properly used, will win the war, and our mineral industry will have played an indispensable and essential part in the inevitable outcome.



President, McGraw-Hill Publishing Company, Inc.

This is the eighth of a series of editorials appearing monthly in all McGraw-Hill publications, reaching more than one and one-half million readers, and in daily newspapers in New York, Chicago and Washington, D. C. They are dedicated to the purpose of telling the part that each industry is playing in the war effort and of informing the public on the magnificent war-production accomplishments of America's industries.

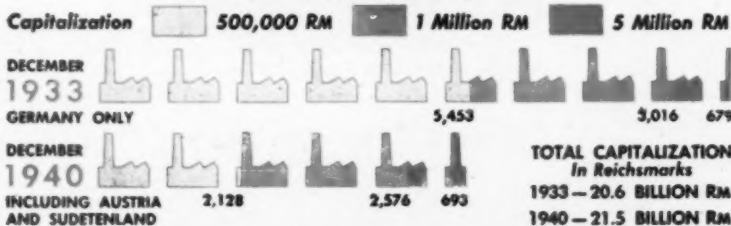
HITLER'S PATTERN

How Nazis Have Penetrated European Finance and Industry



CARTELIZATION OF GERMAN INDUSTRY

Each Symbol Equals 1,000 Corporations



Data: United Nations Information Office

THE WAR—AND BUSINESS ABROAD

Nazi Integration

Military reverses focus attention on difficulties likely to attend the untangling of the Herrenvolk's economic puzzles.

Every Russian slash at the military armor of Nazi Europe is spilling blood on the German domestic front as well. Plans for Hitler's "New Order" are being hastily blue-penciled, and long-range planning has been supplanted by emergency measures dictated from headquarters in the East.

As the time when Allied armies will release subjugated nations draws nearer, there is increasing interest in Germany's techniques of economic integration and speculation about the difficulties that will attend efforts to untangle new corporate and financial relationships. Berlin's deliberate effort to obscure these transactions and to effect them at an accelerated rate may be a sign that the end is near, that Germans hope to carry some of these "war profits" with them into the postwar world.

Signs of Cracking Visible

But numerous as are the hints and rumors that German Europe is on the verge of disintegration, there is balancing evidence that a totalitarian economy is susceptible to almost endless contraction and regimentation. Some of the most obvious signs of difficulty have appeared in recent weeks:

(1) To release manpower for the armed forces and war industry, Walther Funk, Reich Minister of Economics, cracked down on retail business, closed service enterprises (barber shops, beauty parlors, restaurants, amusement houses), banned outsiders from hotel dining rooms, stopped publication of many newspapers.

(2) To maximize control over labor, Funk ordered registration of men 16 to 65, women 17 to 45, for compulsory service wherever needed, sought to increase the use of women in industry.

(3) To put the squeeze on material leakages to nonwar activities and to add to war industry manpower pools, concentration of industry into large units has been accelerated, and artisans are being put out of business and attached to the Wehrmacht.

Army Loses Economic Power

Serious military setbacks may have caused the recent administrative shifts which place additional control over the

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FOR AUTOMOTIVE VEHICLES AND INDUSTRIAL MACHINERY

German economy in the hands of the cartels and their party-member directors. The army has been gradually shunted out of power in the economic sphere. Today the big industrial combines, through their top committee members, are in the driver's seat.

The accompanying map shows only two important German enterprises that have spread across Europe in the wake of the conquering army. At least a half-dozen other banks have preceded or followed at the heels of the Deutschebank in its predatory expansion. And industrial giants like I. G. Farben, Deutsche Zellwolle & Kunstseide Ring, Vereinigte Stahlwerke, and the colonial exploitation firm, Continentale Oel A. G. have followed the pattern of Hermann Goering Werke in taking over industries in conquered areas.

The Minister of Economics has vested the industrialists with the power once held by the military authorities. With allocation of contracts and distribution of raw materials in the hands of men associated with the cartels, fewer orders and less materials have filtered through to the small producer. This pressure on small firms (graph, page 68) has resulted in a death rate of 61% (1933-40) among firms with a capitalization of under 500,000 Reichsmarks.

Nazi Trail Obscured

Looting of conquered territories has followed varied patterns. While Jewish properties and interests were subject to outright confiscation (as in the Reich), elaborate steps have been taken to clothe other economic deals in a mantle of legality. Stocks and securities have been bought and sold, resold and signed over, revalued and retired, in an effort to obscure the trail of Nazi infiltration and to make more difficult the tremendous task of unscrambling the mess in the event of German defeat. Factories have been dismantled and moved, and currency-base metals redistributed, exported, and used for other purposes.

Allied government specialists are constantly engaged in amassing data on the transfers of ownership within Nazi Europe, although they are not optimistic either about the completeness of their information or about the possibility of eventually returning properties to original owners. The Economist, conservative London weekly, questions whether "the unpicking of the fabric of German-made industrial concentration in Europe will necessarily be the right policy after the war" and continues:

"Postwar Europe may need and welcome this industrial integration once it has been divorced from the dire purpose for which it was forged by Germany. It may, therefore, be unwise for the United Nations to commit themselves to the automatic dissolution of these industrial marriages, however great may have been the duress under which some of the parties consented. In any case, it would be attempting the im-

possible to undo every transaction which the United Nations may declare invalid and to trace it back to its source through the many intermediaries that have taken a hand in it."

Allies Will Make the Rules

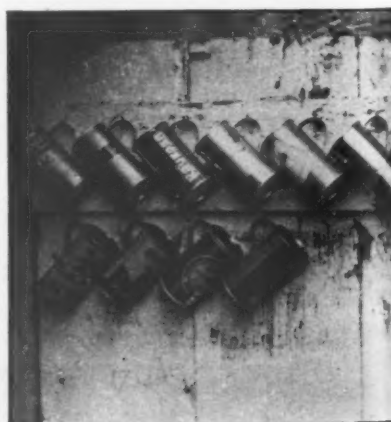
Eventual victory, however, will place the decision and the power in the hands of the Allies, and the solution may lie in the establishment of a supernational body for the gradual readjustment of claims, interim administration, and even, in some instances, permanent control.

Although it is well known that many of the most important business and political leaders bought insurance against the final collapse of Nazism by scattering funds outside the country even in the earliest years of the Reich, few evidences are available that this has been possible since the beginning of the war. Such a flight of capital, and even of individuals, may be expected as Germany's military plight worsens and will be a certain sign that the ship is sinking.



EGYPTIAN MUGS

In Egypt, where nothing is wasted, enterprising helpers for the Women's Emergency Helpers Organization collect empty American soldiers' beer cans, and by removing tops and adding handles, convert them into mugs for hospitals, trains, and canteens.





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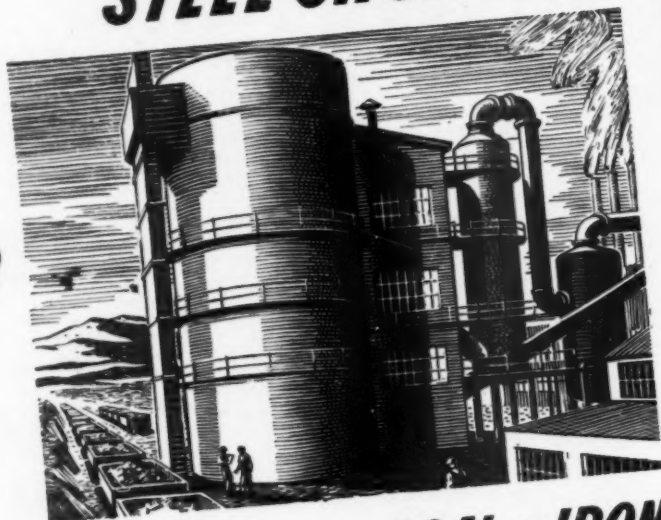
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**NORTH CAROLINA'S COAL AND IRON
DEPOSITS FORM IDEAL COMBINATION
FOR PRODUCTION OF SPONGE IRON**

"SHIPBUILDING contracts have been canceled, munitions and other war production has been retarded, and military programs have been altered downward for want of steel***" (*U.S. Congressional Committee for Investigation of the Steel Shortage Situation.*)

Tens of thousands of North Carolina boys are in the Armed Forces, and North Carolina wants those boys and their comrades-in-arms from other states to have the tanks, the planes, the guns and the ships that will assure them Victory . . . Victory that is possible only if the steel shortage is ended.

In North Carolina are millions of tons of magnetic iron ores suitable for the production of sponge iron. North Carolina has untapped coal deposits of chemical composition and physical properties suitable for iron production.

In some areas coal and iron are found in the same deposits.

The U. S. Bureau of Mines has reported, after tests:

"The by-product yield of this coal is entirely satisfactory . . . reasonable to expect a 70 per cent yield of metallurgical coke, 10,000 to 12,000 cubic feet of good gas, 11 gallons of tar and 25 to 27 pounds of ammonium sulphate" per ton of coal.

Sponge iron can help lick the critical steel shortage. North Carolina is an ideal location for sponge iron production. Away from congested centers, yet close to the richest consuming markets, North Carolina has the further advantages of native-born labor, ample power, mild year-round climate and excellent transportation facilities. Write today, Commerce and Industry Division 3065 Department of Conservation and Development, Raleigh, North Carolina.

NORTH CAROLINA

CANADA

Ceilings Eased

To stimulate output and maintain control, Canada lets primary prices rise; Ontario labor bill fought.

OTTAWA—Still seeking a formula that will make inflation controls stick, Canada has reshuffled ceiling administrations and hopes American Stabilization Director James Byrnes's new toughness (page 16) will help bolster her stand. Worried by the production and supply problem, Ottawa decided that the way to solve it was to take producer-prices of primary commodities from under Price Chief Donald Gordon's ceilings.

• **Production Boost Sought**—In a redistribution of price-fixing powers, Gordon loses control of primary prices of agricultural products to Minister of Agriculture, James Gardiner; fishery products go to the Fisheries Dept.; coal, wood, and some other commodities, for which demand is divided between war production and civilian consumption, go to the Munitions and Supply Dept. The move means higher prices for producers as an inducement to them to increase output.

Gordon retains control of wholesale and retail prices and distribution, and Ottawa remains committed to preserving his price ceilings for civilian consumers. Combined with wage ceilings, these controls are Canada's main fortifications against inflation. Price increases to primary producers will not be passed on but will be paid as Treasury subsidies.

• **Industrial Court Formed**—Ottawa's aim is to relieve its basic anti-inflation structure from the pressure of supply shortages in consumer goods by needling production without puncturing consumer ceilings. The program for boosting production also takes into account potential supply needs of the promised assault on Axis Europe by the United Nations.

The Mackenzie King government moved at the same time to strengthen its wage ceiling. Administration of the wage-bonus law and other wartime labor decrees is shifted from a twelve-member National War Labor Board, which failed to avert the recent steel strike, to a three-man board which will function as an industrial court.

• **Controversial Labor Bill**—Headed by Justice Charles P. McTague, Canada's leading conciliator of industrial disputes, the new tribunal will try labor relations cases in public. Employers are repre-

...nted on the board by Sen. Joseph
...ench; Labor by J. L. Cohen, C.I.O.
...legal counsel. Ottawa expects the Mc-
...ague body to head off threatened re-
...umption and spread of the steel strike
...next month.

But Dominion industry is worried by
the Ontario Provincial Government's
proposal to make collective bargaining
mandatory and give the C.I.O. and
A.F.L. a monopoly in labor representa-
tion. That law would bar independent
unions and impose the closed shop and
the dues checkoff on all Ontario in-
dustries.

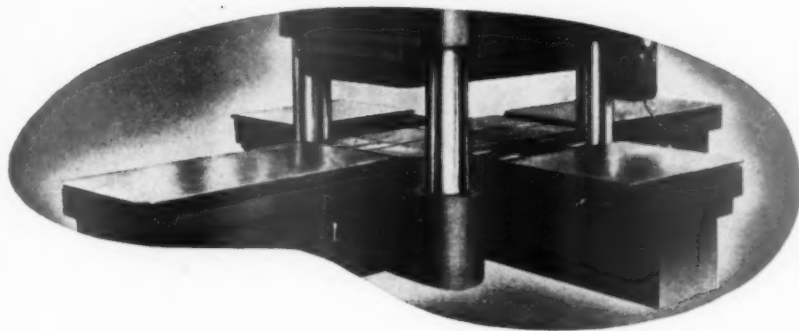
• **Defeat Seems Likely**—Federal officials
and industry fear that if Ontario passes
such a law other provinces will follow
suit—especially industrialized Quebec
where big labor organizations are not
strong and where wages generally have
been lower than at Ontario. With in-
dustry and independent labor joining
forces against the bill, it seems probable
that the provincial government would
resist C.I.O. pressure and let the plan
lie in a committee.

• **Newsprint Pool Enforced**—By threat-
ening to take over properties of news-
print companies refusing to obey the
recent Gordon board order allocating
newsprint output among units of the
industry and distributing benefits and
burdens of contraction through a profits
pool, Ottawa has broken resistance to
the plan and subdued protests. Last
of the holdouts, a big Ontario company
mainly owned in the U. S., has made its
initial payment to the pool fund after
proposing to withhold payment in a
test of Ottawa's authority.

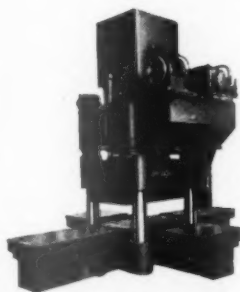
• **Objections Overruled**—Protests, at-
tached by other companies to their pay-
ments, are being ignored by Commodity
Prices Stabilization Corp., trustee for
the fund. Meanwhile, subsidies are be-
ing paid to companies whose tonnage is
less than the percentage of total produc-
tion fixed by the Newsprint Administra-
tor as their share.

Federal authorities were prepared to
crush defiance of the order by taking
over properties of resisting companies.
They would have been handed back to
their owners on terms which assured
compliance. Now that resistance is
ended provisions of the pool order may
be modified to meet major objections.

• **CMP in Canada**—Canadian priority
officials look for an easing of difficulties
in procuring supplies of U. S. materials
for Canadian war contractors in the
second quarter under initial operation
of the Controlled Materials Plan in the
Dominion (BW—Dec.26'42,p32). First
quarter supplies came through under
overholding application of the Produc-
tion Requirements Plan. For the third
quarter Canadian contractors will be re-
quired to support applications for ma-
terials with more information on their
requirements than was demanded for
the second quarter.



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PRODUCTION

Arms' Economies

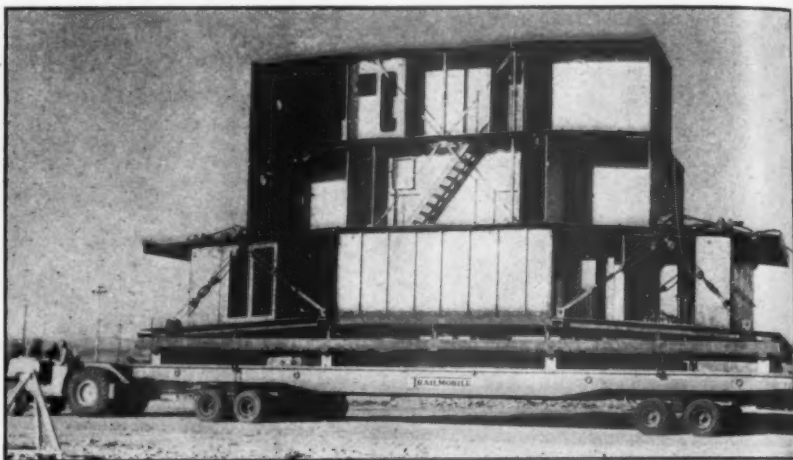
Scarce materials saved by substituting noncritical items in war production, but quality is maintained.

Substitutions of scarce materials in armaments have been accomplished thus far without sacrifice of essential quality, and many more are possible if standards can be relaxed. Those conclusions were reached by the Society of Automotive Engineers in their war production meet-

ing last month. They were confirmed last week at the semiannual meeting of S.A.E.'s materials and processes committees in Dallas, Tex., Feb. 10-13.

Meeting in Texas for the first time, and thus giving recognition to the rapid development of aircraft manufacture in that state, representatives of 35 aircraft plants from California to Connecticut gathered with material and parts suppliers to set up new wartime specifications for raw materials used in plane production, maintenance, and delivery.

New or revised specifications for more than 125 items were adopted, the materials ranging from aluminum alloys, copper tubing, and steel castings to



PRIME MOVERS

Trailer makers have had a tough time keeping pace with demands for conveyances to move ever bigger prefabricated ship sections, but they are still a jump ahead. When engineers in Kaiser's Richmond (Calif.) shipyard asked the Trailer Co. of America for a trailer

to move 50 tons, they got a 60-footer to move 150 tons (above). A traffic stopper, the trailer has no trouble in hauling a large segment of superstructure. At the Federal yards in Kearny, N. J., a big 16-wheel trailer (below) moves a 65-ton deck and hull section from the processing shops to the ways—and without a hitch.



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Almost any car owner can lengthen tire life by regular attention to some of these matters.

But in times when tires must last from now to an indefinite date, it is not enough merely to increase tire mileage — the aim must be to get the very maximum through skilled attention to all.

It takes an expert's special touch to assure that. Why not simply put it up to your General Motors dealer to look after your tires and your car — and be sure of a job done right?

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The Automobile User's Guide answers questions about taking care of your car and tires in wartime. For a free copy see any General Motors dealer or write, Customer Research Staff, General Motors Building, Detroit.

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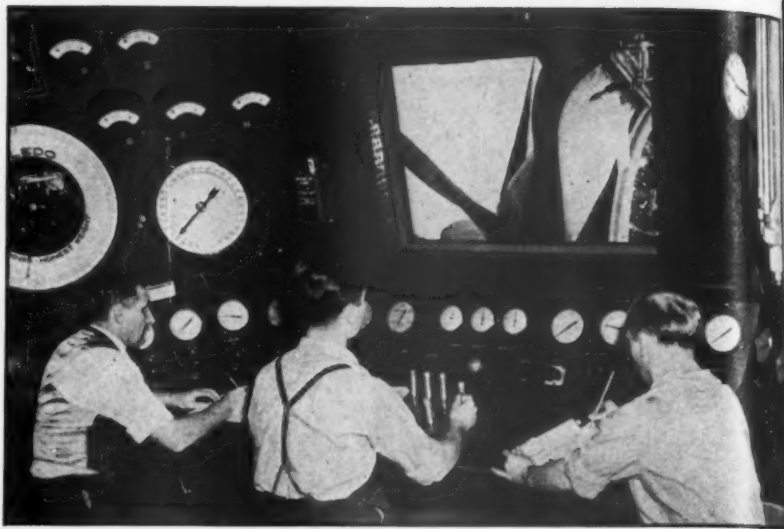
greaseproof paper, synthetic rubber, felt, and engine-wrapping bags.

Both the January and the February meetings were links in the S.A.E. plan to promote better products and decreased costs through the combined research of all companies and by the adoption of uniform specifications. That the plan is working out is attested by results reported at the earlier war production session:

• **Changes in Guns**—The Bofors 40 mm. gun was made less "critical" by substituting cast copper silicon for tin in bushings and bearings and by using lower alloy steels. Engineers M. F. Garwood and E. H. Stilwill of Chrysler revealed.

McI Young and Herman H. Hanink of Wright reported aircraft engines will soon have a new set of alloy steel compositions for most working parts, chosen from the National Emergency series (BW—Aug. 29'42, p50). Air baffles, formerly aluminum, are now made of cotton fabric impregnated with a plastic, they added.

• **Savings on Trucks**—Chevrolet's John G. Wood and R. F. Sanders revealed



Flanked by 30 instrument gages, a Ford test crew gets set for the trial run of a plane engine and propeller to probe strength and test weakness.

that in 14-ton Army trucks, 107 rubber items, 129 copper or copper-base alloys,

57 tin and tin-base alloy items, and 60 nickel and chromium alloy items have been replaced by noncritical substitutes without sacrificing durability or safety.

Although Japan holds the East Indian tin mines, bearings present no problem. Naval Engineer L. M. Tichvinsky reported successful tests on substitutes, including lead-base, arsenic lead-base, silver-lead base babbitts, alkali-hardened lead, cadmium-silver, cadmium-nickel, and copper-lead alloys.

• **Steel Saves Brass**—Lt. Col. H. R. Turner of Army Ordnance told how steel has been substituted for brass in cartridge cases. Seventy manufacturers contributed to this change after Electric Auto-Lite Co. and American Rolling Mill Co. cooperatively proved it could be done.

This Little Motor Used to be Twins



**DUMORE ENGINEERING
PROBLEM NO. 5276**

"Design one motor to take the place of two. You must eliminate the weight and bulk of one — yet maintain the power of the two we are now using on our ammunition booster device!" Dumore went into action. Night and day sessions in Dumore laboratories created a motor that met every specification and produced power plus. Within 90 days thousands of the new units were being installed in combat planes. Problem No. 5276 is another example of how Dumore coordinates engineering skill with quantity production.

THE DUMORE CO., Dept. 483-B RACINE, WIS.

Dumore

**FRACTIONAL HORSEPOWER
AIRCRAFT MOTORS**

Plate Shrinker

Portland (Ore.) company works out method of handling galvanized metal plates that eliminates burning, fumes.

Galvanized metal plates can be shrunk without burning, and the deadly fumes that have made the work a hazardous occupation can be completely eliminated. These are claims made by Albina Engine & Machine Works in Portland, Ore., for a process it has developed.

• **More Working Time**—Traditionally, "fume sickness" has made plate shrinking an unpleasant job, to put it mildly. Some metal working plants figure a shrinker loses an average of six days a month from it, and other workers (such as welders, shipfitters, pipefitters, and



You should see me do a strip tease!

And you will . . . if you happen to be looking around a poultry dresser's on any busy day.

But friend hen is more reluctant to lose her feathers than she sounds. In fact, it takes some scientific coaxing to do the job speedily and well.

The "coaxing" in this case is a Wyandotte Compound which, when used in solution with scalding water, loosens the plumage and prepares it for

quicker . . . cleaner . . . and more economical . . . picking.

Such innovations as this reflect Wyandotte ingenuity. They illustrate that working knowledge of the ways of business which enables Wyandotte technicians to come through so often with a new idea and a better method.

All of which is one good reason why Wyandotte has become headquarters for specialized cleaning materials. It is only

common sense that an organization that can devise a finer product for everything from bottle-bathing to bomb-washing should be called upon to solve every kind of cleaning problem.

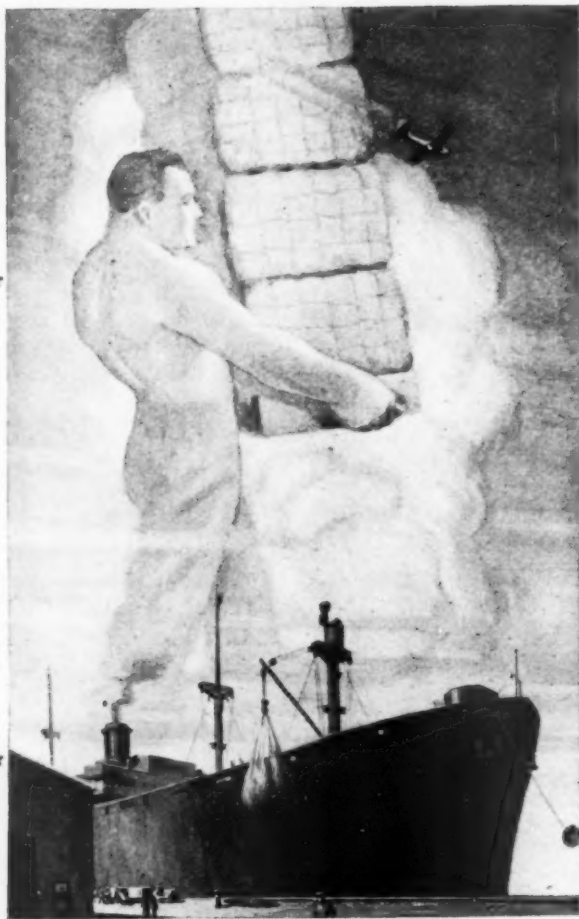
• *Wyandotte Chemicals Corporation consolidates the resources and facilities of Michigan Alkali Company and The J. B. Ford Company to better serve the nation's war and post-war needs.*

WYANDOTTE CHEMICALS CORPORATION—WYANDOTTE, MICHIGAN

Specialized Cleaning Materials for Business, Industry and Institutions • Wyandotte Cleanser for Home Use • Alkalies • Chlorine • Calcium Carbonate • Calcium Chloride • Dry Ice

 **Wyandotte**
OFFICES IN PRINCIPAL CITIES

SPEEDING MATERIALS THAT AMERICA MAY BE FREE



Get behind the Treasury's 10% plan. Urge every employee to earn a 10% button. Keep the T Flag flying over your plant.

On the vital battle lines of American production MOBILIFTS are helping speed war materials on their way to the fighting fronts of the world. These tireless workers of steel require no "time out" . . . they are on the job 24 hours a day to help draw the final curtain on the acts of the Axis. VAUGHAN MOTOR COMPANY, 835 S. E. Main Street, Portland, Oregon.

MOBILIFT

electricians) haven't been able to work in the immediate neighborhood of shrinking operations. Shrinkers generally work two men to a torch, each working 15 minute intervals. The new method, according to Albina officials, makes respirators unnecessary and permits shrinkers to work continuous 8-hr. shifts.

Under the old process, plates become roughened and need sanding to smooth the burned surfaces for the painters. Burning is often so intense that the plates are weakened and have to be replaced. No sanding is required with its process, Albina declares, the surface isn't injured, and painters can begin work immediately.

• "Starved" Flame Used—The flame used in the new method is highly oxidized—about 15 lb. of oxygen to 10 lb. of acetylene in the hose. The torch is lighted with a neutral flame, i.e., oxygen 1.05, acetylene 1.00. The flame is then starved of acetylene at the torch (being sure to keep the pressure in the hose) by turning down the torch valve. This leaves the flame highly oxidized and cools it.

An 11-hole torch tip is used—10 holes in a $\frac{3}{8}$ radius with one hole in the center (holes made with a size 60 drill). It is held from $\frac{3}{8}$ in. to 1 in. from the galvanized surface with the flame held steady until the metal is cherry red, and a barely perceptible "flowing" is noted on the surface of the heated spot.

• Method Easy to Learn—The withdrawal of the flame at the exact moment can be learned only through experience. However, practice under the eye of an expert in the method makes a learner expert within an hour or two, Albina officials say.

STRATEGIC SLUDGE

Some 30,000 tons of sewage sludge, thoroughly processed and dried, are being used as camouflage material on the grounds of a big war production plant too important to be named. Spread to a depth of several inches, the dark-colored material (which looks like humus and has no objectionable odor) promises to obliterate telltale reflections from the locality's light-colored soil until grass has had time to grow.

Disposal of sludge from sewage treatment plants (there are now about 1,000 of them in this country, according to the editors of McGraw-Hill's Engineering News-Record) has always been a No. 1 municipal headache. Though it makes an excellent fertilizer, as evidenced by standard Chinese farm practice, American gardeners and growers are blinded to its good qualities by an intense aversion to its source. If the camouflage idea gains any momentum, there will be joy in many city halls and velvety, nonreflecting lawns around strategic war plants.

5 WAYS TO GET

a jolt in the Pocketbook

... as shown by actual cases from U. S. F. & G. files



SLIPS ON ICE, SUES FOR \$10,000

It was only a small patch of ice on the sidewalk, but Mrs. ——— of New York State valued her injuries at \$10,000 when she slipped. It would have meant financial loss and courtroom headaches for the property owner, but thanks to a public liability policy with U. S. F. & G. the owner was protected and relieved of trouble and expense. You may get a jolt if someone is injured on your premises and sues you for damages.



PLATE GLASS WINDOW SMASHED BY CAR

The shopkeeper wasn't pleased to have an automobile in his display window . . . because it had skidded in, out of control. But within 24 hours U. S. F. & G. had replaced the broken . . . but insured . . . glass. The life of display windows averages 8 years, and the cost of plate glass has been rising. You may get a jolt if your plate glass windows are smashed . . . and not insured.



ONE BURGLARY CAUSES 30 CLAIMS

Pity the poor tailor! Not only was his shop burglarized, but he was faced with 30 irate customers demanding full value for their stolen clothes. Fortunately his burglary insurance with U. S. F. & G. paid all of the claims. Today, with crime on the increase, you may get a jolt in the pocketbook unless you are adequately insured against burglary, robbery and similar hazards.



HOW SHIPPING CLERK EMBEZZLED \$34,500

When a shipping clerk turned salesman, stealing merchandise and selling it, he cleared \$34,500. His employers were only partially covered, having failed to take the amount of fidelity insurance recommended by their U. S. F. & G. agent. So the partly insured employers had to assume a large portion of the loss. If war is making you use new and untried workers, you may get a jolt unless you review your insurance in the light of today's conditions.



INJURED BY EXPLODING BOTTLE

Just three days after he mailed his U. S. F. & G. agent a check for the premium on a new \$10,000 accident and health policy, a ginger ale bottle exploded, completely blinding the insured in one eye. The U. S. F. & G. paid the claim. You may get a jolt from injury or illness unless you carry adequate accident and health insurance.

Consult your Insurance Agent or Broker—as you would your Doctor or Lawyer

To help you avoid serious financial jolts, your local U. S. F. & G. agent places at your disposal knowledge of insurance and how to use it—plus on-the-spot service in the payment of losses. He will be glad to make a Graphic Audit of your present insurance program—to help you guard against wartime risks which make an insurance audit imperative. Your U. S. F. & G. agent is one of thousands serving communities great and small throughout the United States, its possessions, and Canada. Consult him today.

U.S.F.&G.

UNITED STATES FIDELITY & GUARANTY CO.
and its affiliates.

FIDELITY & GUARANTY FIRE CORPORATION

Home Office  Baltimore, Md.



CHICK: It would save a lot of time and effort if these things were equipped with Rock Fasteners.

CLUCK: One more crack like that and you can scratch for yourself.

FASTER PACKING AND UNPACKING WITH GENERAL BOXES

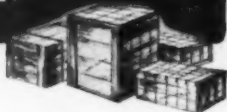
• Important man-hours are saved in the packing room by use of engineered General Boxes. These savings in time are helping to release men for other vital war work.

The General All-Bound is a one-piece shook and requires nothing for assembly but two hands and a small tool. Sides and ends are joined together easily and firmly. No nails are required. Closing is quick and positive. Rock Fasteners (loop closures) seal the package, insuring maximum safety. At destination—opening is accomplished without delay . . . while the durability of General Boxes assures re-use.

Why not see how General Boxes can speed war shipments in your packing room? General Box engineers are helping many manufacturers meet Government packing specifications. Let them help you meet your wartime shipping problems—write today.

For manufacturers of war products: General Heavy Duty Wire-Bound and Nailed Wooden BOXES and CRATES • For Domestic Services: Corrugated BOXES and Wood Cleated Fibreboard CRATES • Discounted for the Duration: Generalite and Nailed Strapped BEVERAGE CASES.

GENERAL BOX COMPANY



General Offices: 502 N. Dearborn St., Chicago, Ill. District Offices and Plants: Brooklyn, Cincinnati, Detroit, East St. Louis, Kansas City, Louisville, Milwaukee, New Orleans, Sheboygan, Winchendon. Continental Box Company, Inc.: Houston, Dallas

NEW PRODUCTS

Low-Melting Alloy

Newest of several low-temperature-melting alloys, formulated by Cerro de Pasco Copper Corp., 40 Wall St., New York, is Cerrosafe. It is a mixture of bismuth, lead, tin, and cadmium, weighs approximately 0.35 lb. per cu. in., is completely molten at 190 F., well below the temperature of boiling water. Although it was developed specifically for accurately proof-casting the cavities of dies and molds during their development in the tool room, it is already finding wider application as a filler for delicate airplane parts which must not be distorted during machining and grinding. Another application is the protection of wood patterns and core molds from the moisture in foundry and core sand. Here the metal is applied by a special low temperature spray gun.

Rotary Infra-Red Machine

A new Rotary Infra-Red Machine for expanding antifriction bearings before assembly has been completed and shipped by Infra-Red Engineers and Designers (formerly Infra-Red, Inc.), 1633 E. 40th St., Cleveland. In it is a 36-in. perforated metal turntable which revolves between an upper and lower group of infra-red heating lamps at speeds that can be varied from 2 to 20 minutes per revolution.

Another new machine is now being built with a turntable 8 ft. in diameter and an inbuilt spray-painting booth to apply a lacquer finish to manufactured parts of an undisclosed nature before they come under the heat of infra-red lamps which will dry and condition the finish. The capacity of the 8-ft. turntable will equal that of an infra-red tunnel 25 ft. long, yet will swing in a floor space of only 10x10 ft.—a matter of consequence to any plant with limited space and a need for infra-red drying, baking, processing, preheating, etc.

Utility Can

Fibreboard with a bursting strength of 500 lb. per sq. in. is the basic material of the 20-gal. R-V Utility Can, new product of the Arvey Corp., 3462 N. Kimball Ave., Chicago. It is impregnated with an oil- and water-resistant thermoplastic, stitched together with heavy flat wire, topped with an overlapping lid of similar construction, and equipped with rope handles. Indicated uses range from the collection and transportation of various kinds of industrial scrap to the vermin-proof storage of fruits and vegetables in store and home. It is claimed that the can is staunch enough to handle ashes and garbage.

The manufacturer is also producing a new line of nestable R-V Tote Boxes (not illustrated) to carry or store small castings, forgings, fittings, or machined parts between industrial operations. They come in three standard sizes, the largest of which is 21½x13½x10 in. Though they are made of a heavier



impregnated fibreboard with a bursting strength of 800 lb. per sq. in., they are lighter in weight than the metal tote boxes they seek to replace.

Viscosity Tester

Some of the polymer solutions which go into the manufacture of various synthetic rubbers and plastics are so thick and molasses-like, hence so slow-running, that their viscosities are difficult to determine by usual laboratory methods. To facilitate and speed such determinations, R. P. Cargille, 118 Liberty St., New York, is bringing out the new Young-McArdle Viscometer which consists of eleven 4½x1 in. sealed tubes containing liquids of certified viscosity and four empty tubes of exactly the same size for making comparisons.

You pour a test sample into an empty tube, leaving a bubble of air at the top when you cork it. Viscosity is determined by inverting the sample and comparing the speed with which its bubble rises with the speeds of the bubbles in the eleven known standards. The bubble in the most viscous standard takes only about three minutes to rise. Similar Viscometers are available in a smaller size for testing less viscous oils, rubber cements, solutions of glue, gum, starch, sugar.

LABOR

Plant Tribunal

Douglas Aircraft pays counselors to prosecute the complaints of employees, but unions sniff at system.

If the aircraft unions get one foot in the door at the traditionally open-shop Douglas Aircraft Co. through the forthcoming National Labor Relations Board election at the El Segundo plant (BW—Feb. 13 '43, p7), they will be in a position to take a crack (as they have long wanted to do) at Douglas's streamlined employee-counseling service.

• **Handbill Campaign**—To date the unions have had to content themselves with distributing handbills among Douglas workers. In these the system has been described as something extra in the line of "company unionism" and a "smart device for closing the door to unionism."

If the C.I.O. United Automobile Workers and A.F.L. Machinists Union lose at El Segundo, the unions have indicated they will charge before NLRB that the counseling setup provides a basic trade union service at the company's expense and constitutes an unfair labor practice.

• **Dividends Cited**—The Douglas management insists that the service is neither designed nor intended to frustrate unionism and that it is paying off in better morale, a lower percentage of turnover, and increased production.

Donald Douglas, head of the aircraft firm, was his own employee counselor until his organization grew too big. For a while, the personnel department took over. Even had this setup been able to keep pace with payroll expansion, employees tended to veer away from it.

• **Galbraith Named**—Douglas dumped the whole works into the laps of independent counselors—business men, educators, executives, paid by Douglas to listen to and represent the employee who has a kick and be a catalyst between the employee and management. To head this system, Douglas last week appointed A. C. Galbraith, labor relations vice-president of Union Oil Co. of California and professor of industrial relations at Stanford University.

Complaints are seldom about wages or other bargaining matters, but are personal. Rosie, the riveter, discovers that her job exposes her to jibes because she has to bend over before the men. Others are dissatisfied with working conditions. Still others have money troubles.

• **Domestic Advice**—Although not a domestic relations court, the counselor



1943
TRANSPORTS
GET 'EM THERE SAFER!

...thanks to speed
born on troopships of '17

In this Global war, getting our fighting men to their destinations *safely* often means getting them there quickly...out-running the U-boat packs. That's where America's former luxury liners come in—ocean greyhounds that made blue ribbon crossings in the days of peace. And in their speed, Sturtevant pioneering plays its part—yesterdays of pioneering that speed victory today.

In the last war it was two ships, the "Great Northern" and "Northern Pacific", their fires fanned by the *first* Sturtevant vertical turbine driven blowers, that established record crossings in troopship service. And when U.S. troop handling records of this war can be announced,

it will be the former S.S. America or one of the thousand other Sturtevant-equipped ships that will have won a new blue-ribbon of the Atlantic.

Every sea-going fan that is squeezing the last knot of speed from every drop of fuel aboard our Victory Fleet can thank yesterdays of Sturtevant pioneering... pioneering that is bearing fruit today in countless ways to step up the speed and power of America's war machine.

B. F. STURTEVANT COMPANY
Hyde Park Boston, Mass.





I WEIGH A **TON** ADOLF!

ME? *I'm only an ounce of energy.*

That *extra* ounce, welling up from the heart and into the arm of a riveter, a steamfitter's apprentice, a woman with a soldering iron... working just that much harder to win the war!

I'm only a minute.

That *extra* minute spent by rock buster and brain worker, to do the job better, sooner... clipping time off the schedule, bringing victory that much nearer!

I'm only a war bond.

That *extra* bond bought this month, secured by sacrifice, by making things do... to buy another nail for your coffin, Adolf!

I'm only a letter.

That *extra* letter this week, warm and personal and dear, sent without waiting for an answer to the last one... penned to a fighting man, in an evening taken away from the movies.

Only these Little Things, Adolf

—small in themselves...but together —132,000,000 times mightier than your slave armies! Diluting the poison of your propaganda, sapping your Wehrmacht, breaking your back under the blows 132,000,000 aroused Americans are striking, together and willingly, with the inexorable sledge-hammer of Truth. ... for Freedom is a big word, written one letter at a time. We spelled it with blood and toil in

1776. Today, faint though it be in the sands of time and tyranny, the strong hands of America are etching it deeper again... this time, for eternity!

Here at Tobe our special task is to produce Little Things called Tobe Capacitors. They are used by the Army and Navy in many ways, as part of electrical circuits that require reliable condensers of long life under all operating conditions... Modestly, we believe that in making ever-increasing numbers of Tobe Capacitors we're doing one more Little Thing that will help achieve the Big Thing we're all after.



A SMALL PART IN VICTORY TODAY—A BIG PART IN INDUSTRY TOMORROW

setup does respond when asked for advice. Most of its members are in the middle years and are parents. Women counselors attend to feminine problems; women coming into war work have details of child care to be settled.

The counselors are available to all shifts in each plant, and are subject to checkup by employee complaint. A single complaint might be written off, but if several employees complain about the way a particular counselor handles their cases, then something may be wrong with the counselor. It is investigated, and perhaps a shift is made.

• **Permanent Fixture**—After a year's test, Douglas felt that this kind of employee representation was performing a new kind of service that showed up in production records. He has made it a permanent part of the industrial relations setup.

Unions Challenge

Policy-making decision of NWLB in packing case appealed to President. It will end up where John Lewis does.

The National War Labor Board was listening this week for repercussions of its monumental decision in the meat packing case, and what it heard was not reassuring.

• **Labor Members Dissented**—Its labor members had dissented from its denial of a wage increase to 150,000 meat packing workers, issued on the ground that packing wages had already risen to the limit allowed by the formula set in the Little Steel case—15% above the January, 1941, level. They had not joined in the board's policy-making statement that, as a war agency operating under the President's economic stabilization order, it is required to hold the established line despite later rises in the cost of living. (NWLB had suggested to the companies in the case—Swift, Armour, Cudahy, and Wilson—that they might protect themselves against emigration of workers by extending working hours at overtime pay rates.)

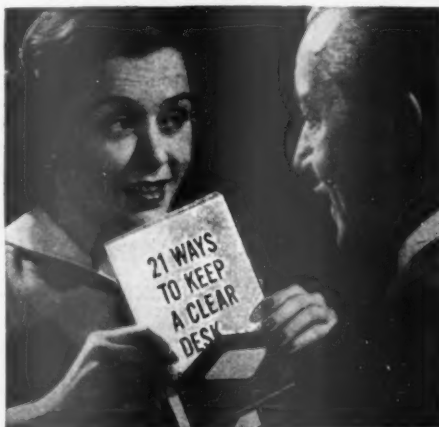
• **Won't Take It**—Now the unions in the case—C.I.O., A.F.L., and an independent—have refused to "take" the decision. The A.F.L. unit especially, in appealing to the President to reverse NWLB, has warned of "wide and deep" strike sentiment among its members.

A White House declaration backing up the board may be expected. But it will be the wage issue in coal that will ultimately settle the one in meat packing. For if John Lewis gets his wage increase for the miners (page 92), the packing house unions will keep the peace only if they get a proportionate pay boost.

Mr. Hayes would know — but he's in Washington today



"Yes sir, I'll have him call you tomorrow. . . Whew! It's sure embarrassing when you can't give a customer a simple piece of information. Makes a poor impression, too. Why can't the boss let me know what's apt to come up while he's away? Next time I'm going to ask him for some written instructions to go by."



"MR. HAYES, IF YOU'D put more things in writing, I could handle the work better when you're away. This little book shows office-tested printed forms that cover every detail of a job... assign the work, keep it moving, get it done right, and fast. Our printer can adapt them to our set-up easily."



EFFECTIVE PRINTED FORMS need the right paper. Better paper comes from better paper machines. For 40 years Hammermill has maintained staffs for engineering development and chemical research. Many of the "good practices" of the industry have been originated and developed at Hammermill.

TO SPEED UP YOUR OFFICE WORK: Hammermill offers two free booklets . . . How to avoid "junk heap" desks . . . How to get information, pass along orders and instructions, check results and responsibility. Send for these free helps now!



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Please send "21 Ways to Keep a Clear Desk" and "How to Design a Business Form."

If you use an office duplicator, check kind: ☐ stencil; ☐ gelatin; ☐ spirit.

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Position _____

(Please attach to your company letterhead)



200 Years Ago . . .



John Harris started something

ABOUT TWO HUNDRED YEARS AGO John Harris was planning the town he later founded, Harrisburg, on the banks of the Susquehanna. Harris was one of the handful of men in the colonies who first realized the necessity of strengthening local defenses—and then did something about it. He wrote repeatedly to provincial and state officials urging increases in both personnel and material for the home guard. To the Revolution, which interrupted his plans for converting “Harris Ferry” to Harrisburg, he gave liberally—without stint—of his time, money, and influence. ¶ He was a strong supporter of our first four-star general, George Washington. To both men, winning the war came first; all else was secondary. At last in 1785 Dauphin County was created and John Harris saw his postponed plans come true. Harrisburg became the county seat. ¶ The spirit of John Harris has never left Harrisburg. His city, and his namesake steel manufacturer, hold winning the war as job Number One! Not weeks or months but *years before Pearl Harbor* a major part of the production of Harrisburg Steel Corporation was devoted to the armed services. John Harris would have approved. He really put us on the track of winning our Army-Navy “E” for excellence in production.



HARRISBURG STEEL CORPORATION

HARRISBURG, PENNSYLVANIA

Kaiser Doctrine

Portland case expected to evolve formal NLRB policy governing units that expand after contract is signed.

Whatever else the National Labor Relations Board proceedings against the Kaiser shipyards (BW—Jan. 16 '43, p. 80) may accomplish, they seem destined to evolve a formal doctrine governing the status of collective bargaining units that expand after a labor contract is signed—a significant point to employers whose payrolls have mushroomed under the impulse of war necessity.

• **No Inflexible Policy**—The question has arisen in other cases, but NLRB has attempted to settle each on its merits without applying any inflexible rule. It was raised this week by attorneys for Henry J. Kaiser as the board's trial examiner recessed until Mar. 15 the inquiry into unfair labor practice charges involving Kaiser's Portland (Ore.) shipyards.

And it was conceded that the Supreme Court is likely to be called upon for a judicial answer to the questions: How long must an employer wait before signing a contract, when his payroll is growing? Will collective bargaining contracts be torn up and redrawn from month to month, as the working force fluctuates?

• **Burden on Kaiser**—The 4,500 pages of testimony and 150 exhibits adduced by the board in the five weeks required to complete its case contained no hint of an answer. Upon resumption of the hearing, the legal burden will rest on the Kaiser attorneys to prove that the shipbuilder acted in good faith in signing closed-shop contracts with the A.F.L. Metal Trades Dept. when employment was small, and that he did not discriminate against the C.I.O. Industrial Union of Marine and Shipbuilding Workers.

Kaiser's Oregon Shipbuilding Corp., which now employs 35,000, was barely in existence when a contract was signed May 12, 1941, with the A.F.L. on petition of 65 of the 66 workers then employed. As shipbuilding time neared in the Swan Island and Vancouver yards, the C.I.O. began exerting pressure, and Kaiser announced on Mar. 18, 1942, that the yards would be open-shop, with an election later to let the workers choose a union.

• **Second Contract**—But on Apr. 17, 1942, on petition of 154 workers out of the less than 300 then on the payroll, Kaiser signed another closed-shop contract with the A.F.L. unions (BW—Apr. 25 '42, p. 73).

What prompted Kaiser to change his mind was the fear of trouble from a

Santa Fe

reports to its passengers and shippers on its first year of war operation



★ ★ ★ *About this time every year, it is customary for Santa Fe to report on the condition of this railroad to its owners, the stockholders of this company.*

This year, Santa Fe feels the need of making an additional report—not only to the stockholders, but also to the people who have helped us accomplish the biggest job we have ever had.

These are the people who ride on a railroad, ship on a railroad, and work on a railroad.

Santa Fe salutes them and thanks them.

Without their cheerful cooperation, this difficult year would certainly have been harder to pull through, if not completely impossible.

This report is built around old-fashioned American sportsmanship.

★ During 1942, Santa Fe moved 79 per cent more passenger miles . . . and 122 per cent more freight ton-miles . . . than in 1918, during World War I.

And all this was done with 26 per cent fewer locomotives than we had in 1918.

These figures indicate the greatest volume of business we have ever handled.

They also indicate why you may have experienced some difficulties and inconveniences in traveling or shipping by train during the past year.

Crowded Trains

If you had difficulty obtaining reservations, or had to stand for a portion of your trip—we were just as concerned as you were over any inconvenience it may have caused you. And we mean it!

Our passenger traffic volume was up 102 per cent last year as compared with 1941. Gasoline rationing, in our territory, will increase that volume even more this year.

The Santa Fe must handle this additional load with its present passenger cars, as no new cars will be built during the war.

Late Trains

We hate late trains, too! . . . and we are sorry if they have caused you to miss a connection or an important meeting.

In these days of unprecedented passenger volume it is not always possible to maintain schedules with on-time regularity . . . and since military trains have the right-of-way over everything else, they often cause our regular passenger trains to be delayed.

At many stations along the line, mail and express are heavier than in normal times—and take longer to load. This is another reason why trains are delayed.

Dining Car Service

We regret if you had to stand in line for a seat in the diner—and we honestly wish we could correct this situation.

Five and more settings per meal are frequently required in our dining cars in these days of limited equipment and crowded trains, whereas two settings used to be enough.

Car Shortage

Mobilizing cars necessary for troop movements has caused a shortage of cars at some points on the line.

Special troop trains are becoming almost routine on the Santa Fe. In just one case, we moved an entire division from one camp—and it took 55 complete trains to handle the men and equipment.

We must also keep our passenger cars in constant service to handle the in-

creased traffic all over the line. For this reason, we cannot always concentrate extra cars at any one point.

Freight Cars

Due to the submarine menace and the diversion of freighters to other services, almost all of the intercoastal freight tonnage formerly handled by ships through the Panama Canal was hauled by the railroads in 1942.

Export freight moving to Pacific ports from eastern United States over the Santa Fe in 1942 increased 374% over 1941!

All this brought about an unusually heavy demand for Santa Fe freight cars . . . increased considerably the average length of haul . . . and occasionally caused delays in delivering empty cars at some loading points. It also indicates Santa Fe has many busy months ahead.

Keep 'Em Rollin'!

Please remember there's only one thing we want to do more than keep trains on time and supply cars as promised—and that's keep troops and war freight on their wartime schedule. And we know that's the way you want it!

★ ★ ★

The record traffic we handled last year was made possible not only by the wholehearted cooperation of our patrons and employees, but also by the harmonious attitude of the Army and Navy, the wise direction of the ODT, and the help from the Interstate Commerce Commission's Bureau of Service.



SANTA FE SYSTEM LINES

Serving the Southwest for 70 Years

third labor organization—the Independent Brotherhood of Welders, Cutters, and Helpers, affiliated with neither A.F.L. nor C.I.O. Early in 1942, the welders, made an aggressive bid for recognition in Seattle and Tacoma shipyards but were thwarted by the A.F.L. boilermakers' closed-shop status there. So they began infiltrating the Kaiser yards in Oregon, only to be headed off there by the new A.F.L. closed shop.

BOY-POWER BUILDS PLANES

Under plans being worked out by Burbank and Pasadena school authorities with business management, about

400 boys between the ages of 16 and 17 soon will be working half-time in the Lockheed and Vega aircraft plants at Burbank, Calif.

So far, some boy-power has been utilized in war plants under a "cooperative" arrangement, whereby school credit is given for part-time work in factories. This plan, however, gives the boys four weeks of straight factory work alternated with four weeks of school work; school credits under such an arrangement as this are necessarily somewhat lower than otherwise.

It was found that no California laws interfere, provided the boys are not put on night shifts.

Home Swap Plan

A scheme to reduce war workers' travel and conserve transport facilities proposed for Pittsburgh.

A "swap-your-home" plan has been proposed in Pittsburgh to encourage war workers to move closer to their jobs and thus relieve the strain on transportation facilities by having tenants trade houses and apartments. Still in the discussion stage, the proposal seeks to save tire mileage and gasoline now being used daily by thousands of workers commuting many miles. Home owners would not participate in the swap campaign.

● **Some Drive 90 Miles**—A survey among 200,000 employees of war plants in eleven industrial sections of Allegheny County showed that many workers are driving 90 miles daily in round trips to and from jobs. Increasing wartime restrictions on rubber, gasoline, and automobiles mean that such travel cannot be continued indefinitely. For many of these workers, driving is the only way they can get to work.

In the second major shift of downtown Pittsburgh workers, 6,000 employees of 600 firms staggered work hours this month to spread the flow of traffic into the Golden Triangle and release trolleys and buses for hauling war workers. Transportation committees had hoped 1,750 firms, employing 30,000 workers, would participate. Last March, 15,000 downtown workers staggered hours to permit curtailed transportation service during the peak hours. While transportation has not bogged down, authorities warn the situation can become worse when irreplaceable equipment is worn out.

● **A Realtor's Plan**—To relieve the situation, the swapping idea was sponsored by Albert A. Murrer, past president of the Pittsburgh Real Estate Board and chairman of its war housing committee. Believing the plan workable if the co-operation of realtors and tenants is obtained, Murrer has conferred with committees of rent men on details.

Under the proposal, realtors would act as clearing houses by establishing swap sheets whereby war workers willing to move would be listed with the section in which they wished to live. Such a service of matching tenants would stimulate a trend already noted among some workers.

● **Morale Factor Cited**—Opponents of the suggestion fear the morale of workers will be affected if they are uprooted from neighborhoods of long association. More amenable to moving would be those who recently were attracted to the Pittsburgh district by the war boom.

Industrial Truck Care Pays You Dividends

A. E. DOROD
ASSISTANT CHIEF ENGINEER, BAKER INDUSTRIAL TRUCK DIVISION
THE BAKER-RAULANG CO.



BAKER HELPS VITAL WAR PLANTS TO "KEEP 'EM RUNNING"

"The investment in regular inspection and lubrication of your industrial trucks is one of the best you can make." This statement from an article appearing in recent trade publications, written by a Baker engineer, is more true today than ever before. The unprecedented increase in industrial production and the huge amount of handling required in the movement of war materials, have created demands for power trucks which are taxing the productive capacities of truck manufacturers. Thus, with new equipment difficult to get, truck maintenance is extremely important, for trucks now in service must be kept running at top efficiency... So that the essential points of truck maintenance may be made available to everyone concerned with their operation, reprints of this article are offered in bulletin form.

Do You Know

That many possible causes of excessive wear or loss of power are not apparent in ordinary running but can be determined only by inspection?

Do You Know

That over-lubrication can often be as harmful as under-lubrication?

Do You Know

That it is desirable to blow the dust and dirt off the truck daily before oiling?

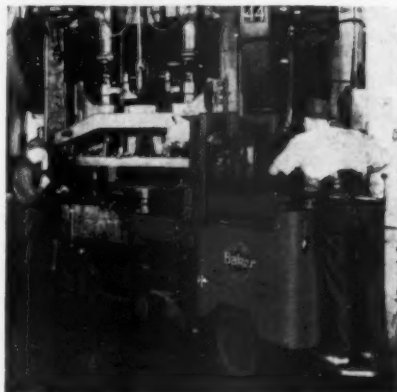
Do You Know

That overloading a truck is helping the Axis by breaking down irreplaceable equipment?

Do You Know

That service brakes should be tested for stopping with the heaviest load to be carried, and parking brakes for holding maximum load on steepest incline truck must negotiate?

These are a few of many points covered in the Baker bulletin "Industrial Truck Care." Write for your copy or copies today.



BAKER INDUSTRIAL TRUCK DIVISION of The Baker-Raulang Company
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In Canada: Railway and Power Engineering Corporation, Ltd.

Baker INDUSTRIAL TRUCKS

*Lost to American Industry
Since Pearl Harbor—
DEAD - - - 46,300
INJURED - 4,000,000
By Accident*

BLACK MARKET REPORT

THE figures are out! The Black Market in Manpower has had a good year! Since Pearl Harbor it has succeeded in robbing American industry of millions of productive man-hours through accidental injury and death.

Think of the tanks, planes, guns, ships and munitions this army of missing men could have produced! You say, "Something ought to be done about it!" You're right! Accidents can be prevented by a greater regard for safety in every industrial operation. The Safety Engineers of Employers Mutual—often referred to as "the G-Men of safety"—have proved this so often that it has

become a tradition in the plants of our policyholders. These men have defeated the Black Market in Manpower through sheer leadership and experience in the development of safe practices in the operation of machinery, the handling of materials and by the

introduction of time-tested safeguards to the health and safety of workers.

No industry need be without this capable, man-saving service. Your compensation insurance placed with Employers Mutual brings this service the moment the policy is issued. Safety in your plant then becomes a mutual project between you and this company in an effort to save money through the prevention of losses and the subsequent reduction of insurance rates. Mutual dividends to policyholders (current rate 20%) increase your saving.

Our proposals bristle with facts that leave no doubt of the value and effectiveness of this service. We welcome the opportunity to prepare a proposal covering your compensation insurance needs. An indication of interest to the home office or nearest branch will receive immediate attention.



EMPLOYERS MUTUAL FIRE INSURANCE COMPANY

OFFICES IN THE PRINCIPAL CITIES OF THE UNITED STATES • Consult Your Local Telephone Directory

Lower Handicap

Los Angeles employers get some surprises from experience in hiring war workers who have physical disabilities.

For seven years the Los Angeles office of the U. S. Employment Service has had a special department for placing handicapped persons in jobs, one of the first in the country.

Recently Mrs. Edythe Kennedy, head of the department, reviewing her records for the past 12 months, discovered that several thousand deaf-mutes, hard-of-hearing, crippled, defective-visioned, and blind persons have been successfully put to work since Pearl Harbor.

High spot was the placing of a legless woman with one arm in a job where she is giving satisfaction as a receptionist and typist.

• **War Opens Doors**—It has been the experience of the department that the biggest obstacle to placing handicapped persons is employer ignorance of what they can do and fear of their liability to accidents. The war emergency is reducing such obstacles fast, Mrs. Kennedy reports.

Employers are analysing jobs to see

whether they can be handled by handicapped persons and are getting some surprises. Deaf-mutes, for instance, have accident-protection in the fact that they are not distractable, and they are quick to detect faults in the operation of a machine by its vibration.

The Employment Service records show that most of the handicapped persons placed have gone into standard jobs within their abilities, get standard wages, and work alongside physically normal workers.

• **Employment Data**—Placement involves interviews to get the facts about the disability, the applicant's attitude towards his handicap, his education, working history, hobbies, and other data. The employer is informed about the handicap and from there goes on to judge fitness by ability and training.

Employers with experience in using handicapped people have reported to the Los Angeles department that care must be used in placing to avoid accidents, but that handicapped people can be profitably employed.

The California Council of Agencies for the Physically Handicapped, recently organized by 14 groups in the state with headquarters in Los Angeles, is coordinating state-wide training and placement work. Its members have placed handicapped persons in more than 1,700 concerns in California.

LEWIS ANSWERS BYRNES

John L. Lewis has taken last week's anti-inflation speech by Economic Stabilizer James F. Byrnes personally as, indeed, a number of government officials have suggested it was intended.

The \$2-a-day wage increase demanded by Lewis's United Mine Workers has threatened to raise a full chorus from other unions and Byrnes undoubtedly addressed himself to that possibility when he put the whole weight of the Administration against pay boosts (BW—Feb. 13'43, p5).

Lewis's retort came this week in an editorial in his union's paper which says that the miners believe "they have a right to present their case and their arguments in support of their demands without being condemned as economic villains in advance of that opportunity." Avoiding a commitment on whether a strike would back up the union's arguments, Lewis's paper emphasizes the demand still stands.

At the behest of Solid Fuels Coordinator Harold L. Ickes, coal operators have agreed to start wage conferences with Lewis on Feb. 22, three weeks in advance of the scheduled meeting time.

Slowly and reluctantly, Washington is resigning itself to the belief that there will be trouble in coal this spring. An industry-wide strike looms as a distinct possibility.

FOREMEN'S UNION

Foremen join the array of collective bargaining units in the Ford Motor Co. plant with the approval by the National War Labor Board of a contract signed by the company with the Foreman's Association of America (BW—Aug. 29'42, p58).

This precedent-making contract provides for adjustment of wages, retroactive to Nov. 5, 1942, to iron out pay inequalities between foremen doing similar work. To a general foreman, shift foreman, and job foreman in each Ford department, it adds an assistant general foreman and sandwiches an entirely new class of supervisory help—division foremen and division shift foremen—between the job foreman and the shift foreman. Thus the duties of supervision will not be spread so wide.

Among the detailed arrangements, it is provided that each foreman will wear a different type of badge, so that any one in the plant will know at a glance to which class of supervisor he is talking.

The agreement was arrived at by a committee of eight men representing the Foreman's Association of America and a group of eight building superintendents representing the company. For problems involving supervision, a company labor relations man has been assigned to operate out of the Ford labor office.



ON TIME!

We are fully aware of the importance of "time table deliveries" in war production. Many of America's leading manufacturers entrust their precision tool problems to us because they have confidence in the accuracy of our work as well as the promptness of our service.

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TOOL
MAKERS

THE **ELIOTT**
Manufacturing Co.
MILFORD, CONNECTICUT



Trade Marks "ScotTissue," "Soft-Tuff," "Washroom Advisory Service" Reg. U. S. Pat. Off.

THE MISSING MAN

Fight contagions with sanitary, modern washrooms

THE plant washroom has become vitally important in today's race for production. It can help prevent the spread of sickness—and sickness is keeping over one million workers off the job. Sickness is robbing you of a week's production every year.

Over half of this loss is due to the common cold and its complications . . . to the ordinary kinds of illness that spread quickly from hand to mouth, from worker to worker.

A well-designed, modern washroom encourages your workers to wash up frequently, especially

before mealtimes. Thus a strong barrier is erected against the common contagions.

Many companies have found, too, that attractive washrooms pay important dividends in employee good-will.

When designing or remodeling a washroom, consult a competent architect. He knows how to make it cheery and sanitary . . . easy to maintain. He will plan for smooth traffic flow. He will arrange fixtures for the greatest convenience, and to prevent waste of supplies.



THE SCOTT WASHROOM ADVISORY SERVICE

For a complete survey of your washroom facilities, call on the Scott Washroom Advisory Service. It may be able to point out many ways to increase hygiene, efficiency and comfort.

If you supply ScotTissue Towels, it will suggest ways to prevent waste, so that other companies can share the supply. Our educational material reminds workers that one ScotTissue Towel dries completely.

Actually, a "Soft-Tuff" ScotTissue Towel can absorb double the water left on hands. And it has ten times the rub strength of previous ScotTissue Towels, though soft as ever.

We invite you to send for our portfolio, *Health Is Ammunition, Too*—proven aids for establishing a good industrial health program.

Scott Paper Co., Chester, Pa.

SCOTTISSUE TOWELS
STAY TOUGH WHEN WET



MARKETING

Clothes Rationing?

Buying spree inspired by shoe order depletes stocks but fails to precipitate clothes rationing. It is still due by 1944.

In an attempt to outguess Uncle Sam on rationing one woman last week bought 60 dresses from her favorite store.

To a less extent, this has been going on ever since WPB, without warning, rationed shoes (BW—Feb. 13 '43, p92). Consumers have been buying apparel feverishly in anticipation of surprise restrictions, particularly on coats and suits. The rush for men's wear was moderate and short-lived, but the scramble for women's apparel was more persistent.

• **Store Sales Zoom**—National department store sales for the week ending Feb. 6 rose 19% above last year, were up even more in war industry areas (Dallas 51%, San Francisco 32%, Kansas City 48%, Atlanta 40%). In New York City where sales rose only 11% that week, the increase was 20% for the week ending Feb. 13. Volume increases in individual apparel departments were far above this figure.

The buying spree tapered off somewhat following Donald Nelson's assurance that clothes would not be rationed in 1943. And as retail activity quieted down so did alarm in WPB's Office of Civilian Supply.

Willingness of WPB officials to rely on less drastic counter measures than total rationing indicates that they believe the panic will subside as soon as women see that rationing is not forthcoming. It also reflects the healthy condition of inventories before shoe rationing touched off the buying spree.

• **Rationing Still Far Off**—Failure of WPB to announce rationing last week is no indication that the prospect has been abandoned. In fact, rationing is inevitable, and retailers know it as well as the WPB officials who will order it into effect. But it isn't expected before fall, and maybe not until 1944. No rationing order has been submitted to OPA, and no drastic plans are in the works. For its part, OPA hopes to ration essential clothing by September or October, but OPA has no authority; it only carries out WPB orders. Before any general rationing is instituted, orders cutting the high-end and low-end items off the clothing list are likely, thus forcing manufacture into the middle grade lines.

Also before rationing will come orders designed to conserve loom capacity and

labor by cutting out nonessential textile lines. Thus, production on items like bedspreads and draperies will be limited.

• **Basic Factors in Equation**—How soon rationing comes depends (1) on how well stocks weather the drain of the past few weeks, and (2) on supply and demand in 1943.

Measured in linear yards, retail supplies of clothing are almost at the peak levels of 1942—or they were until scare-buying started a few weeks ago:

	Billions of Linear Yards
Jan. 1, 1939.....	1.991
Jan. 1, 1940.....	2.018
Jan. 1, 1941.....	2.168
Jan. 1, 1942.....	2.903
Jan. 1, 1943.....	2.960

With the continued buying spree threatening to deplete clothing stocks

Nylons—With Bonds

When Bloomingdale's, big New York department store, last week received a shipment of coveted nylon stockings, its executives said the treasure might as well be buried in the gold depository at Kentucky's Fort Knox.

Sale at the hosiery counter would mean a stampede like the one that followed silk allocation (BW—Aug. 9 '41, p24). Boosting prices to limit buyers would be futile, even if it were not illegal under OPA's nationwide ceiling prices for all grades of nylon hose (BW—Nov. 7 '42, p64).

• **Tip from Boston**—But Bloomingdale's found a way out in the example of Filene's. Faced with the same problem in Boston the week before, that store used nylons to stimulate the sale of war bonds. Anyone buy-

rapidly, the National Retail Dry Goods Assn., acting at the urging of WPB, telegraphed 30 of its leading member associations in important retailing centers asking them to cooperate in devising ways of deflating clothing sales locally. Presumably retailers might limit the number of items sold to a customer as they did last year to prolong supplies of silk and nylon hosiery. But merchants, aware that any action on their part may start another wave of scare buying, will move cautiously.

• **Avoiding the Scares**—A retailer versed in shortage psychology might not refuse to sell six wool suits to a customer who asked for them; probably would tell her that she could have the suits but that it was not necessary to hoard. In such manner the merchant would hope to avoid the scare buying that might be set off by a sewing circle statement that Store X had refused to sell more than one woolen suit. Meanwhile, the rationing scare gives merchants a chance to sell high-priced, high-margin goods to con-



ing a war bond of any denomination was allowed to buy two pairs of stockings while the supply lasted. Bloomingdale's set the same rules and advertised a day ahead.

The store estimates that 10,000 women poured in to buy hose within 15 minutes of store opening. At any rate, within 40 minutes approximately 3,000 pairs had been sold to half as many women and thousands more had been turned away. Orders in gross lots by New York firms that foresaw their offices emptied of women employees were turned down. Bond sales totaled \$39,800.

• **Jobbers Come Through**—Bloomingdale's got an unexpected windfall the night before the sale when hosiery jobbers, who for months had denied possession of any nylons, patriotically came through with last-minute consignments to help the bond sale.



THE MOST IMPORTANT WAR COMMODITY OF ALL

STILL UNRATIONED!

Day and night all over the industrial front of America, electric power is traveling out from giant power stations with the speed of light to keep the wheels of our production machinery turning *ceaselessly*.

How fortunate we are that 90 per cent of American industry is electrified. How fortunate we are that our great utility systems were designed and built with a sense of public responsibility which placed first emphasis on adequacy and dependability of power supply — at all times and under all conditions.

That's why the electrical industry has been able to keep pace with rapidly mounting demands with relatively little expansion of facilities and correspondingly small requirements for critical materials. That's why electricity is *still unrationed, still unrestricted*.

When all the contributions to the winning of the war are added up and appraised, the contribution of America's public utilities will stand high on the list, for in this war of machines, electric power will prove itself to have been our greatest necessity, our greatest asset.

Behind electricity stands steam, the principal means by which electrical power is generated. For despite our vast new water power development, steam still accounts for two thirds of our *total* public power output.

Of the many-sided contribution Combustion Engineering has made to the war effort, none gives us greater satisfaction than the fact that we have installed so many of the large high-pressure steam-generating units upon which our public utilities are now depending for the maintenance of their vital service. How dependably these C-E units are serving may be judged from the fact that some of them on which we now have 1942 performance figures were producing steam for over 95 per cent of the total hours in our first year of total war.

A-716

C-E installations span the whole gamut of steam generating requirements from small stoker-fired boilers of less than 50 horsepower to the largest power station units.



COMBUSTION ENGINEERING

200 MADISON AVENUE, NEW YORK, N. Y.



Out there somewhere is a monument to an American soldier — a pile of rocks . . . an empty gun . . . an empty helmet.

He was young and strong — eager and willing to fight for his country. He did fight . . . bravely.

But for the want of bullets . . . or planes . . . or tanks — he lost his life. He didn't understand . . . he didn't know . . . that accidents of carelessness and inefficiency back home . . . cost him his life. He didn't know that since this country went to war accidents have caused the loss of more than 500,000,000 man-days of labor . . . lost forever for making the bullets and building the planes and the tanks that could have saved his life — and the lives of his comrades.

Accidents are a deadly enemy that prolong the war. Saving or losing a day, an hour, or even a minute on the production front, means life or death to those on the battle fronts.

Accidents are caused. They can be prevented. Because the Norfolk and Western Railway knows from long experience that this is the literal truth, it has wholeheartedly joined the nationwide accident-prevention campaign of the War Production Fund to Conserve Manpower. Started by American industry, and endorsed by the War Production Board, this campaign is raising \$5,000,000 from business and industry to be used to finance a vast program of the National Safety Council — to protect America's war workers in the factory, in the home and on the streets — and to speed Victory.

Norfolk and Western Railway

PRECISION TRANSPORTATION
BUY U. S. WAR BONDS

sumers who assume that quality is in direct ratio to price.

One thing that the precarious conditions of the past two weeks are sure to do is to halt merchants' abnormal promotion of clothing to compensate for discontinued hardware lines.

• **Textile Supply Factors**—Lastly, when WPB will get around to rationing clothes depends on the unknown quantity of how much clothing can be produced in 1943. The answer depends, first of all, on the supply of fibers, but this is not so critical a factor as either manpower or loom capacity in the mills.

WPB estimates that civilian supply of all textiles in 1943 should not fall more than 10% under 1942. But, production-wise 1942 was not a year of plenty, and textile stockpiles at the converter and wholesale levels were reduced as civilian supply fell short of civilian demand.

• **Cotton, Rayon Short**—The cotton textile industry is working largely on direct and indirect war orders, and unquestionably the 1943 supply will be reduced. Last year about half the total production of 12,000,000,000 yards went into civilian supply, and while this permitted retailers to build up enormous stocks in some lines, already they are short of others like shirts, socks, and underwear.

Civilian use of rayon, likewise, is sure to be cut this year. Production of certain types has been restricted because of the use of critical chemicals; alcohol and acetic acid are short. But what really cuts into the supply is the abruptly increased Army and Navy demand for rayon yarns. Increasing quantities are going into tire cords, uniform lites, and cargo parachutes.

• **Plenty of Wool, But**—Least predictable of all is the woolen supply. WPB has announced a tentative plan for doubling the supply available for production of woollens and worsteds. But even though the country is in possession of the largest woolen supply in history, WPB's proposal cannot be considered a promise. Meanwhile with uniform materials in adequate supply, at least temporarily, and with military orders reduced, thousands of looms are idle. Others continue to operate only by extending woolen supplies with various blends.

Woolen mills argue that the Board of Economic Warfare holds a stockpile of 800,000,000 lb. of wool and estimate that with more coming in almost daily from Australia BEW will have at least a million pounds by the middle of the year. In addition, dealers and mills hold between 375,000,000 and 400,000,000 lb. This stock, together with the 67,000,000 lb. of Uruguayan wool that the government has just purchased and this country's annual clip of 35,000,000 lb., means that supplies are sufficient for two years of full-time operation of the entire American wool textile industry.

• **Not Just Ours**—Washington counters by pointing out that the BEW stock-

pile represents the joint supply of the U.S. and Great Britain and probably constitutes the stockpile for all the occupied countries—to be distributed as the Allies recapture them. With demand so far flung and so unpredictable, it is hard to tell just how much BEW and WPB will see fit to release for civilian clothing in 1943.

Example in Butter

Principle of fixed area price gives consumer a break by eliminating the confusion of the dated ceiling.

OPA's new principle of fixed "area prices" is going to get its first workout in the sale of butter. Last week transactions in this commodity at the primary and wholesale levels were put on a basing-point system (MPR 289). Since retail sales have been on a fixed margin system of price control for more than a month, this means that in any given city there is now a common retail price beyond which no store can legally sell.

• **Easier on Consumer**—OPA figures that the principle of "area prices" will make it easier for consumers to know the ceiling price of a commodity (BW—Jan.30'43,p18). Heretofore, such ceilings have varied inasmuch as they represented a "freeze" as of a certain date. But now that wholesale prices are set in dollar-and-cents terms, and retail margins are fixed, the consumer will be able to keep one exact price in mind.

As the situation stands, MPR 289 fixes sales to wholesalers, chain store warehouses, retail co-ops, the U. S. government, and carload-lot purchasers in dollar-and-cents terms at Chicago, New York, San Francisco, and Fort Worth. Prices outside these areas are the base price, plus or minus certain freight charges which OPA has worked out in the order. When wholesalers sell to retailers, they are allowed fixed-cents margins for their services.

• **New York Example**—Here is how the new system will work out in New York City:

The wholesaler buys a pound of 93-score butter under a ceiling of 47½¢. He adds 2½¢ for delivering to the retailer, plus 2½¢ for putting the butter into prints and cartons. Thus the retailer buys for 52¢. If he is a small independent retailer, he can mark up the 52¢—by 10%, making a retail price of 57¢. Big stores (\$250,000 or more annually and all chains) can mark up by 8%, making a retail price of 56¢. But in any event, 93-score butter packed in quarter-pound pieces inside a pound carton will sell for either 56¢ or 57¢.

OPA has set wholesale prices for 93-score butter, 92-score, 90-score, 89-

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Wilmington, Delaware

"Very much pleased with this system. Recommend it to anyone desiring to save time and simplify payroll work."

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Good "Industrial Housekeeping" is more than a matter of buying soaps, cleansers, disinfectants, etc. It should be an over-all economical plan with a regular routine to handle it. Without any obligation to you one of our trained "industrial housekeepers" will survey your plant and make practical recommendations on improving your present system with the idea of saving you time and money. Write Dept. BW for complete information.

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Rust Preventive Compounds to Government Specifications



CUT THIS OUT AND GIVE IT TO YOUR PLANT SUPERINTENDENT TODAY

X-Y=100 WAR-METAL TONS

X equals metals required for steam heating plant and distributing system in one municipality installation.
Y equals metals used in Dravo Direct Fired Heating system for this same plant.

BOTH are equal in B. T. U. output, yet a comparison showed metal savings of nearly a hundred tons with Dravo Direct Fired Heaters as against the central steam system. Installation time, computed in days, instead of months, equals fewer manhours. Analysis of operating costs showed 1/3 to 1/2 less fuel consumption—a war time economy of transportation, as well as a fuel saving.

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Gas
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● Dravo systems are designed for every size and shape structure, industrial, service camp buildings. "All about them" information may be had in Dravo Bulletin 505.

score, cooking-grade, and no-grade. Special prices are also set for route sellers and retail sales at creameries.

● **One Hitch**—There is only one hitch to this pretty situation. Now that the retail ceilings invite such easy comparison the independents are already beginning to yell that the government is literally advertising the fact that chains and big stores can sell for less.

A Consumer Union

Auto workers take a new tack, add Donald Montgomery to staff to advise them on what a buyer should beware.

Donald Montgomery, former consumer counsel of the Dept. of Agriculture and thorn in the flesh of many a distributor of advertised brands, is appearing under new sponsorship. He is now consumer counsel for the United Automobile Workers, C.I.O. Following Montgomery's separation from agriculture, the job with the world's biggest union was offered to him by U.A.W. Vice-President Walter Reuther.

Consequence may be the Agriculture Dept.'s discovery that it is paying more attention to the things that this champion of the consumer movement stands for than it did when he was on its own payroll. At any rate, Montgomery is in a better position to make himself heard than when he appeared under official auspices that were more concerned with maintaining harmonious relations with farmers and the food trades (BW—Jan. 2 '43, p7) than with being of help to the consumer.

● **"Money's Worth" Man**—Montgomery's employment is recognition by U.A.W. that labor has an interest in the cost of living that goes beyond keeping wages up with it. As U.A.W.'s consumer counsel, he will exert his influence on administrative officials responsible for decisions that affect the "money's worth" of the goods and services that labor buys. His job is to pitch in before decisions are reached on allocation of civilian supplies, on price control, on rationing, on standardization and simplification, not merely to gripe about them afterwards.

Following U.A.W.'s lead in hiring Montgomery, C.I.O. is pumping new life into the labor advisory committee of the Office of Price Administration. Made up last June of representatives of C.I.O., A.F.L., and the railroad brotherhoods, the committee has never functioned effectively, because its members couldn't spare enough time from their other duties and were not familiar with cost of living factors—and because the unions just didn't like Leon Henderson.

Montgomery has been put on this



New consumer counsel for the United Automobile Workers, Donald Montgomery seeks a showdown on rationing.

committee with Russ Nixon of the electrical workers, Leo Goodman of the wholesale and retail employees, and Ray Walsh, C.I.O. research man. More new blood may be added as the committee goes into action.

• **For Wide Rationing**—Montgomery aims to tell OPA, Agriculture, WPB, et al. a few things. One is that price control can't be made to work until the public supports it, and the public can't do that till it understands it—which calls for price ceilings stated in simple terms of dollars and cents (page 97). He is also convinced that price control can't be effective without rationing, so he is in favor of rationing about everything except those things that can be supplied in abundance or are downright luxuries. And what Montgomery means by luxuries is anything no union man in good standing can afford. On standardization and simplification, he is plugging for rugged utility at low cost—as defined by government specifications.

Contending that government administrative officials are prone to reach decisions affecting millions of consumers on the basis of generalized and often unrealistic information, U.A.W.'s new adviser is planning to get down-to-earth information on the consumer front for such officials from committees organized by the union's 800 locals.

• **Consumer Groups Watch**—Organized consumer groups, which have long looked in vain to labor unions for support, are hoping that other A.F.L. and C.I.O. organizations will take a hint from the U.A.W.

FIND YOUR MAN FASTER!

VITAL WAR PRODUCTION CAN'T WAIT!



"Cartwright, there must be some quicker way to locate Jones!"

IT isn't a Northwest "Mountie" that "always gets his man" in one of America's largest aircraft plants! It's Operadio voice-paging—the *quickest* way to "locate Jones," give orders, get facts, speed vital war work!

Records show that 650 individuals were located during the plant's first 8 hours of voice-paging operation! And 95% of the paging calls were answered within 60 seconds!

How fast do you locate key-men "somewhere in the plant"? The total of minutes wasted may represent an appalling time-loss! One factory credits voice-paging with a saving of 4,000 man-hours per month!

And it's not only *voice* that works for you! Your Operadio installation can give plant-protection alarm and time signals—stimulate production by means of music scientifically selected for fatigue relief—help speed vital war materials to the men who need them!

Without blare or distortion, Operadio sound leaps to any room or area, adjusts

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MUSIC AND PUBLIC ADDRESS • TIME SIGNAL AND ALARM

BY THE MAKERS OF "FLEXIFONE" INTERCOMMUNICATION

Licensed under U. S. Patents of American Telephone & Telegraph Co. and Western Electric Co., Incorporated

Buy Two Cars for the price of One



A \$1,000 WAR BOND PAYS FOR:

NOW

187 steel helmets
2 submachine guns
37,500 .45 caliber cartridges
18,000 yards of barbed wire
Firing a 50-caliber anti-aircraft machine gun 3,125 times

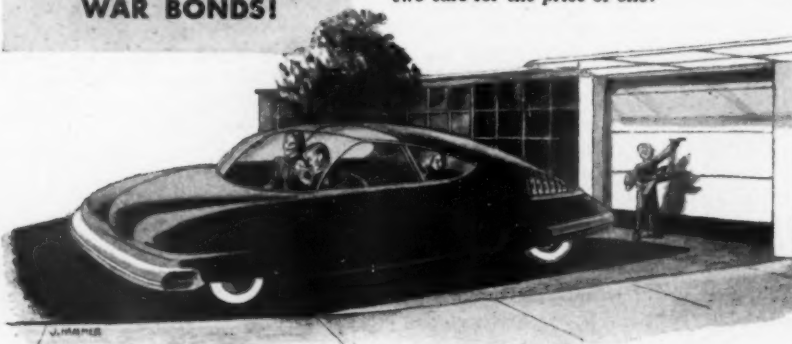
AFTER THE WAR

Cancelling the remainder of the mortgage on your house
Installing a modern heating system
A new fur coat for your wife
Initial payment on a private plane

**KEEP BUYING
WAR BONDS!**

Jeeps are America's 1943-model car, and they're rolling off the assembly lines in droves. Who's buying them? *You*—with the War Bond money you're saving right now! The price of a \$1,000 Bond just about pays for one of these bouncing, jouncing "babies" for the boys in our armed forces to drive to victory. **BUT . . .**

Super-Streamliners are what the boys will want when the war's won and they come home again . . . modern, new, peacetime models sleeker than a bathing beauty, and as economical on gas as a ration card is now. How will you pay for yours? *With the money from your War Bonds!* That's how you can buy two cars for the price of one!



As for ourselves, we're making some peacetime plans, too—plans that should help make life more pleasant for you both in the plant and in your home.

We'll start things rolling along that line when our all-out war production job is finished along with the Axis. Then we'll go back to our 67-year-old job of building rolling and overhead doors in steel and wood for home and industrial use.

The WILSON Corporation
370 LEXINGTON AVENUE, NEW YORK CITY ESTABLISHED 1878

BUILDERS OF ROLLING AND OVERHEAD DOORS IN STEEL AND WOOD

100 • Marketing

Battle of the Suds

Court directs acquittal of P. & G., but finds some Ivory employees less than 99.44% pure in trade practices.

Behind the well scrubbed babies, Hollywood complexions, and gleaming clotheslines that dominate the advertising of the country's biggest soap producers, Lever Bros. and Procter & Gamble, waxes one of the hottest trade battles of the century.

• **Fraud Charge**—Last week, a quiet court session in Boston failed to sustain all the allegations of corruption behind the competitive floating soaps, Swan and Ivory, that the U. S. grand jury had raised. The indictment accused P. & G. of fraudulent use of the mails and industrial espionage involving theft of formulas, production figures, advertising data, and other trade secrets from Lever Bros.

The trial had been expected to climax the 17-year war between the two companies, possibly in a final skirmish before the Supreme Court (BW—Jun. 20 '42, p62). But the result was something less than cataclysmic. P. & G. decided to let well enough alone since the court, although satisfied that there had been a breach of business ethics "to say the least," directed a verdict of acquittal for the company and its subsidiaries. Upon personal pleas of guilty, Dr. C. P. Smelser, P. & G. market research head, was fined \$5,000, his assistant \$1,000, and a Detroit salesman \$500; a fourth employee received a suspended sentence of six months and was placed on probation for one year.

• **Lawyers Busy**—Easy as that result was to take, P. & G. is keeping its fingers crossed about the outcome of a second trial that ended last month in Baltimore, in which Lever Bros. charged the makers of Ivory with patent infringement. But P. & G. isn't relaxing by any means; its legal batteries are hard at work preparing for a third clash on P. & G.'s "home grounds" at Cincinnati. In this case, Procter & Gamble charges Lever with unfair competition and imitation of product and merchandising. P. & G. intends to proceed aggressively with this suit, has visions of pinning back Lever's ears in a manner reminiscent of the 1937 verdict under which both P. & G. and Colgate-Palmolive-Peet collected \$2,500,000 apiece from Lever Bros. by proving patent infringement on their processes for making soap beads (BW—Jun. 21 '41, p32).

The contenders for the No. 1 place in the American bathtub and washing machine have had each other in a lather since 1926 when Lever obtained an

Business Week • February 20, 1943

of-court settlement under which G. agreed to remove from the set a new, red-tinted, octagonal bar with an antiseptic smell that Bros. found too reminiscent of heavily advertised Lifebuoy.

Mutual Espionage Seen—Testimony Boston last week illustrated how makers have kept themselves in water since that time. An ex-Lever boy told the court that Smelser said to him in 1940 when he put on the P. & G. payroll: "You know we have people in Lever Bros. know what's going on, and they probably have people in our place for same thing."

Subsequent correspondence reported Lever's progress three years ago in clearing Swan for the market that had dominated since 1879. It revealed that \$8,000,000 had been appropriated for promotion and advertising in connection with launching. At the same time P. & G. was promoting a new Ivory—whiter, cream- and faster lathering than the old familiar product—made by a new continuous process method like that employed by Lever Bros. for Swan.

Product for Product—The two companies have matched each other, product for product, claim for claim, law for lawsuit. To compete with Lux's Lux Flakes, Rinso, Lux Toilet Soap, Spry, and Swan, Procter &

Helping "Sting" the Enemy into Retreat!



KEYSTONE Wire

Just a few of thousands of wire mill products for war uses.

Machine gunners — men from your own plant and your own community — are stinging the enemy into retreat with steely courage. Like them, their supporting equipment is *efficient* . . . clear down to bullet cores and numerous gun parts of wire mill production.

Yes, steel and wire mills, like Keystone, are now straining every facility to speed billets, rods and wire into tools for Victory. These items, in thousands of forms essential to planes, tanks, guns and ships, too, are helping support our fighting forces.

Victory is industry's job No. 1. That job must be *completed* before Keystone can again help equip American assembly lines for efficient **CIVILIAN** production.

KEYSTONE STEEL & WIRE CO.
PEORIA, ILLINOIS



NEASY HEAD

In the shadow of the political chopping block is A. C. "Oscar" Hoffman. He is head of OPA's Food Price Division, but if Administrator Brown kicks mandatory grade labeling (BW—30'43,p18), out goes Hoffman. A Anderson stalwart, he has yet to talk Brown and fails to understand the timing of pressure politics.

MERIAM MANOMETERS

WIDELY used in laboratory, plant and field to measure pressures, vacuums, drafts, flows of liquids and gases, levels of liquids in tanks—in fact, wherever a permanently accurate indicating instrument is needed.

Available in various types, designs and styles to meet different pressure and service requirements—the result of 32 years' specialization in this field. Ask for Catalog C-10 and tell us about your measuring problem so that we may write you fully. THE MERIAM CO., 1993 W. 112 St., Cleveland, O.

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—THE INSTRUMENT PEOPLE

**DEVORE
PAINTS**

Notice of Dividends

A quarterly dividend of 1 1/4% (\$1.25) per share on the outstanding 5% Cumulative Preferred Stock and a regular quarterly dividend of 25 cents per share on the Class A and Class B Common Stocks of the Company have been declared payable March 1, 1943, to the respective stockholders of record at the close of business February 20, 1943.

DEVORE & RAYMONDS COMPANY, INC.
New York

Turning the "Searchlight" on "Opportunities"



positions wanted

- **EXECUTIVE ASSISTANT**—Chemical Engineer, Harvard Business School graduate. Age 29. Draft deferred. Training and experience in administration; industrial engineering; plant management and operation; production planning and control; personnel. Box 341.
- **MECHANICAL EXPERT**—Specializing in design and betterment of equipment. Box 339.
- **POST-WAR PLANNING**. Sales manager and executive, nationally known manufacturer; proven ability in planning, organizing, coordinating and producing; engineering background; desires position with company which is now ready to inaugurate post-war planning program and the development of post-war products. Box 340.

selling

- **WE WANT TO REPRESENT** a manufacturer of products, or commodities that are a necessity to the present war production, and that are needed in the industrial area of Pittsburgh and 250 miles of surrounding territory. Small technically experienced organization with well located office and excellent reputation. Designer or Engineering Draftsman available. Direct your communication to us at P. O. Box 8001, Pittsburgh, (16), Pa.

wanted—pattern work

- **OLDEST ESTABLISHED** pattern and machine works on Long Island can take on additional wood and metal pattern work. Eppenbach, Inc., 4510 Vernon Blvd., Long Island City, N. Y.

"clues" information

The "clues" column is scheduled to appear in first and third issues of the month subject to limitations of space available. Copy required Monday for Saturday's issue. Rate: .50 a word; \$3.50 per line (or fraction) per insertion, payable in advance. Minimum \$5.00. Box number address counts as 2 words; replies forwarded without charge. Address replies c/o Business Week, 330 W. 42nd St., New York, N. Y. Copy March 1 for March 6 "clues".

Gamble has Ivory Flakes, Oxydol, Camay, Crisco, and Ivory.

For the duration this cross-trumping probably will stick to the field of litigation since, as a U. S. industry, the soap trade has something besides an intramural war to fight. Because glycerine—No. 1 byproduct of soap—is vital to munitions, total soap production was up 40.5% the first year of the war, another 11.7% last year.

• **Advertising Giants**—Meanwhile, advertising men watch the courtroom calendar to see who washes whose soap profits down the drain, for P. & G. is No. 1 spender in both magazine and radio (\$5,392,611 plus \$8,904,887) and Lever Bros. is No. 3 magazine advertiser, No. 4 on the air (\$2,943,408 plus \$5,004,731).

Pickles to Honey

Heinz label to grace new Lake Shore honey jar under agreement to market entire output of W. F. Straub & Co.

New stocks of Lake Shore honey to appear on grocers' shelves as soon as OPA approves the ceiling price will bear a new legend on a familiar label: "Packed by H. J. Heinz Co." By an agreement effective last Dec. 1, Heinz has added the entire output of W. F. Straub &

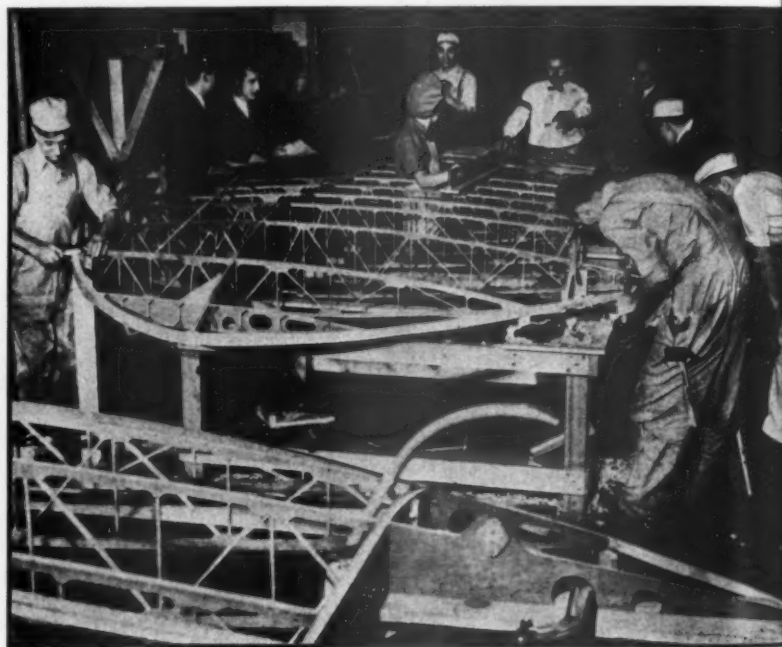
Co., largest independent producer and distributor of honey, to its list of products.

• **Essential Industry**—From a priority standpoint, Heinz probably could have picked a better addition to its "Varieties." Honey distributors can all the blackplate they need for jar to WPB recognizes beekeeping as an essential industry because the honey bee is the only pollinating agent that can be controlled by man.

Bumblebees and other wild insects are no longer numerous enough to pollinate the country's crops adequately. War production has increased the demand for beeswax, which is used as protective coating on ammunition and airplanes, in chemical warfare, and pharmaceuticals.

• **Imports Off**—Most of the 4,000,000 lb. of beeswax produced in this country is ordinarily returned to the hives in form of foundation sheets for new combs, and only a small part of the 5,000,000 lb. usually imported from South America, the West Indies, Egypt and Africa is now being received.

Straub will continue to operate Lake Shore Apiaries, which include about 15,000 hives on the Minnesota-North Dakota border, as well as its receiving stations that collect honey from independent beekeepers in the states, and will deliver the honey in bulk to the Heinz packaging plant at Muscatine, Iowa. In addition, Heinz will purchase large quantities of honey



PICKLES TO PLANES

Although packing both civilian and Army foodstuff in quantity, H. J. Heinz Co.'s new sideline—plywood aircraft parts—grows in importance.

Its normal packing program upset by shortages (BW—Jul. 25 '42, p. 79), the Pittsburgh concern first accepted subcontracts for its machine shops, then began converting more facilities with a view to large-scale aircraft production

independent beekeepers to meet
ated packaging requirements of
00,000 lb. a year.

Bottle Babies—Lake Shore honey
has commanded a premium of 2¢
a pound. By blending, Straub un-
takes to produce a uniform product.
use of uniformity and pasteuriza-
it has been able to promote Lake
honey as a milk modifier for
e-fed babies—a promotion that
es with the Heinz line of baby

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demand for honey has increased
ily since the war began. As soon as
was restricted, food processors sky-
eted the price of honey by buying
hey could get, but currently WPB
imited them to a quota about equal
their 1941 consumption. From 6¢
und in 1941, for strained honey at
farm, the price has jumped to 12¢,
present ceiling. Retail prices have
ased proportionately.

Obstructed Harvest—Supplies
be short this year because the 1942
of 179,000,000 lb. was the smallest
many years—21% smaller than the
crop of 226,000,000 lb. Rainy
ther over most of the country kept
bees confined to their hives during
h of the honey harvesting period.

FINANCE

Dividends Hold

Conservative trend seen
in final income statements, but
payments to stockholders held
up better than earnings.

Although 1942 taxes took a terrific
bite out of corporate earnings (BW—
Feb. 13 '43, p99), final income statements
show that most companies covered their
dividends by a comfortable margin.
Many did it by cutting the dividend
rate, but on the whole, payments to
stockholders held up better than earn-
ings. Even investors who took a reduction
have the consolation of knowing
that as long as income stays around its
present levels, their slice is well pro-
tected.

• **Dividends Conservative**—The accom-
panying table shows how the dividend
picture looks to some 30 representative
companies. While this group is too
small to serve as an adequate sample of



ANY MAN WORKS BETTER



WHEN HE KNOWS

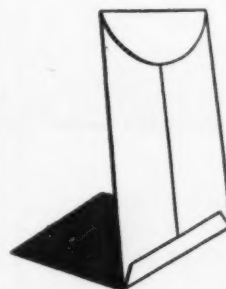
HIS FAMILY IS PROTECTED

What Happened to Earnings and Dividends

Last year was a disappointment
or stockholders who hoped that divi-
dends would stick at the levels they
hit in 1941. Following the trend in
earnings, payments to stockholders
fell off sharply, and the total was
slightly under 1940. However, the
jump was less than many investors

had feared, and at present income
levels most corporations are covering
their dividends by a safe margin. The
following table compares per share
earnings and dividends on the com-
mon stocks of a group of representa-
tive companies which have made in-
come statements for 1942.

	1942		1941		1940	
	Net Earnings	Dividends	Net Earnings	Dividends	Net Earnings	Dividends
American Brake Shoe.....	\$3.22	\$1.70	\$3.56	\$2.20	\$3.49	\$2.10
Atlas Powder	5.90	3.50	6.13	4.50	5.71	4.25
Bethlehem Steel	6.32	6.00	9.35	6.00	14.04	5.00
Begelow-Sanford	3.51	2.00	6.01	4.00	6.11	3.00
Bristol-Myers.....	3.69	1.90	3.56	2.55	3.73	2.55
Cluett, Peabody	3.34	2.25	4.14	3.00	3.74	2.75
Container Corp.	3.07	1.50	2.98	1.50	2.85	1.50
DuPont	5.07	4.25	7.49	7.00	7.19	7.00
Endicott Johnson	4.88	3.00	4.90	3.00	3.20	3.00
Flintkote	2.18	0.90	2.34	1.00	2.10	1.00
General Tire & Rubber.....	2.37	1.00	2.04	1.00	0.85	0.50
Howe Sound	3.78	3.25	3.85	3.75	3.63	3.75
Industrial Rayon	2.64	2.50	3.04	2.50	3.15	2.00
Johns-Manville	6.35	2.25	6.66	3.00	6.35	2.75
S. H. Kress	2.13	1.60	1.99	1.60	2.09	1.60
Kroger Grocery	2.53	2.00	2.71	2.00	2.49	2.00
Liggett & Myers.....	4.56	3.50	5.22	5.00	6.02	5.00
Lew's	7.02	3.50	6.15	3.00	4.82	3.00
P. Lorillard	1.72	1.20	1.44	1.20	1.69	1.20
McCrory's Stores	1.90	1.00	2.24	1.25	2.00	1.25
E. C. Murphy.....	5.33	3.50	7.20	4.00	6.58	4.00
National Steel.....	5.41	3.00	7.79	3.25	6.83	2.50
R. J. Reynolds	1.98	1.55	2.32	2.10	2.55	2.25
Shell Union Oil	1.28	1.00	1.32	1.00	1.05	0.75
Sylvania Industrial	2.42	1.25	2.78	1.35	2.74	1.25
United Carbon	4.47	3.00	4.30	3.00	3.36	3.00
U. S. Gypsum	4.27	2.00	5.42	3.50	5.44	3.50
U. S. Hoffman Mach.....	1.15	0.50	2.88	nil.	1.29	nil.
U. S. Steel.....	5.39	4.00	10.43	4.00	8.85	3.00
Warner Swasey	2.43	1.60	4.81	2.00	4.20	0.60



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"PROTECTED PAY ENVELOPE"

SAFEGUARDS

EMPLOYEES' FAMILIES

FOR DETAILS, WRITE



Can We Help You in Cleveland?



IN busy Northeastern Ohio . . . as in other sections of industrial America . . . war has brought change to most businesses.

Accurate and up-to-the-minute knowledge of business and credit conditions is of more than usual importance now.

Cleveland's oldest bank stands ready to aid you with every means at its command.

THE NATIONAL CITY BANK OF CLEVELAND

EUCLID AT EAST SIXTH
AND
TERMINAL TOWER BLDG.



Member Federal Deposit
Insurance Corporation

THE MARKETS

Treasury financing popped up in the news again this week when Secretary Morgenthau announced that the April borrowing operation will shoot at a goal of at least \$13,000,000,000. This was no surprise to bond men. Ever since last December, when the Treasury tried out its new policy of periodic drives, they have known that the next job would be the biggest. They also know that even after a three- or four-months' breathing spell it will take a lot of hard work to distribute \$13,000,000,000 worth of new securities and make them stick.

• **Cream Skimmed Off**—The Victory Fund committees, backbone of the Treasury's selling organization, will be better organized this time, and they will have more experience. But they skimmed the cream off the prospect list in December. This time, they will have to fan out and get their volume by making smaller sales to a greater number.

This doesn't mean that the government bond market shows any signs of wobbling. On the contrary, the long rest between Treasury operations has made it stronger than it has been at any time since the war borrowing program got under way. Average yield on taxable bonds is now around 2.31%; six months ago it was 2.35%. In the medium-term market, average yield on three- to five-year notes is 1.24%, whereas a month ago it was 1.33%. Trouble is that the Treasury wants to place everything it can outside the regular money market. Hence, low yields aren't an unmixed blessing.

• **Guessing Game**—Favorite game in Wall Street these days is guessing what the April package will contain. To coax out small investors, Morgenthau will have to use a fairly high coupon. Hence, betting favors another 2½% issue like

the Victory bonds of last December. There's a good chance, though, that the Treasury will stick to the intermediate market for its regular issues and count on F and G war bonds to take care of small buyers.

The big oversubscription (\$6,400,000,000) on the \$2,000,000,000 issue of ½% certificates last month shows the strength of the market for short-term issues. It sounds odd to talk about a scarcity of government securities when the national debt is over the \$100,000,000,000 mark, but in comparison with other issues the supply of short stuff is pretty small. Banks are heavily stocked with bonds, running up to ten years maturity. They want short- and medium-term paper.

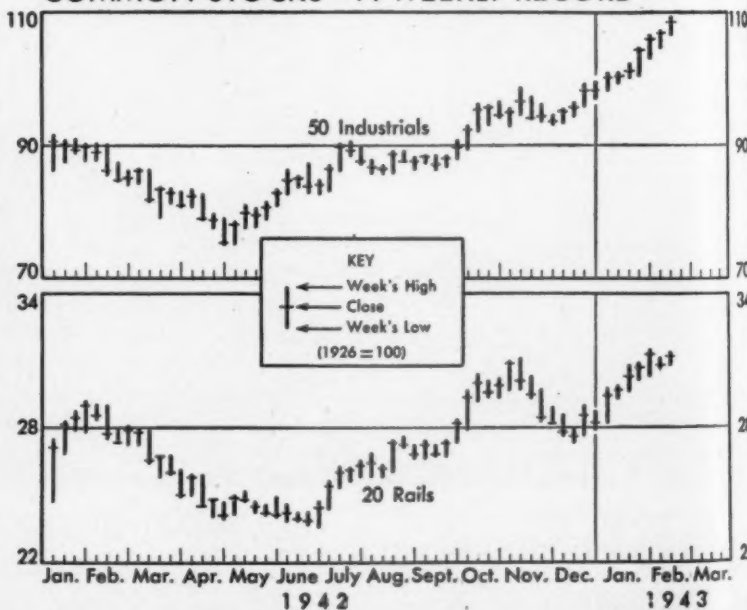
• **Reserves at Ebb**—As the April financing approaches, the question of bank reserves comes back into the spotlight. Last week, reserves of member banks dropped to \$1,640,000,000, the lowest level since April, 1938. Bankers are counting on the Federal Reserve Board to ease the situation before the Treasury makes its trip to the market.

Security Price Averages

	This Week	Week Ago	Month Ago	Year Ago
Stocks				
Industrial . . .	108.7	106.8	101.0	84.7
Railroad	31.2	30.8	30.3	27.3
Utility	42.2	40.4	38.0	33.3
Bonds				
Industrial . . .	116.0	115.6	115.4	106.4
Railroad	91.9	91.1	90.1	87.2
Utility	111.6	111.1	110.5	103.6
U. S. Govt. . . .	109.7	109.7	109.6	108.6

Data: Standard & Poor's Corp. except for government bonds which are from the Federal Reserve Bank of New York.

COMMON STOCKS—A WEEKLY RECORD



Data: Standard & Poor's Corp.

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stry, it illustrates the trend in profits dividends over the past three years. In general, corporations have left a wide margin of safety between earnings and dividends to stockholders. At present some levels, the dividend policy of the companies is well on the conservative side.

Appraisal of the 1942 dividend record—ends on the point of view. In comparison with what investors had feared, it isn't too bad. Measured against 1941, it represents quite a comedown.

On Taxes—Last year began with a series of dividend cuts, and before the end of the first quarter, it was obvious that the trend had turned downward (V-Apr. 18 '42, p. 76). Many companies had postponed any decision on dividends until the tax outlook had cleared. Others shaved the rate in anticipation of rising costs and slimmer profit margins. Aggravating the situation was the fact that many companies had declared dividend payments in December, 1941, to avoid increased taxes on 1942 incomes (stockholders (BW-Dec. 6 '41, p. 100)). Toward the middle of the year, the situation brightened a little. More and more companies began to hit their stride in war production. Final decision on the 1942 revenue act reassured management that had been preparing for the worst in taxation. On balance, 1942 dividends came out well below 1941, only slightly under 1940.

Common Dividends Off—Totals compiled by the New York Stock Exchange show that companies listed on the Big Board paid out \$1,997,461,000 in dividends on common stock last year. This represents a drop of 12.1% from the 1941 total of \$2,271,196,000, but 1941 was a particularly good year. Only three years (1929, 1930, and 1937) have topped it. Common dividends in 1940 totaled \$2,099,000,000; in 1939, they were only \$1,830,000,000.

Although last year's slump dragged down almost every department on the list, some groups made out a good deal better than others. Hardest hit were the tobacco, which dropped 37.4% below 1941. Other heavy losers were building supplies, tobacco, and aviation. Higher was the amusement industry, which gained 19.4% over 1941. Railroad dividends also increased, but the 2% rise was small in comparison with the estimated 52% increase in earnings. The rails have been sinking everything they can spare into debt retirement, and only a small slice of their additional earnings is going into dividends.

Steel's Policy—Paradoxically, the heavy industries, such as steel, showed a big drop in earnings, largely as a result of taxes, but a comparatively small cut in dividends. Main reason for this was their conservative policy in 1940 and 1941, which left them a buffer against declines in profits. U. S. Steel, for example, boosted earnings from \$8.85 a



For those who do not keep Valets

. . . or whose servants spent too much time on errands; and for men who could not leave their businesses . . . Sieur de Velay, resident of Paris, in 1653 began a city mail service. He put post boxes about the city; anticipated the postage stamp by selling wrappers in which letters could be sent.

But alas, like so many pioneers, M. Velay was premature! The service seems not to have been regular. The Royal Post, and the local messenger guilds opposed him. Garbage and mice were often found in the post boxes! And France's first "Petite Poste" died of disuse.

Accustomed as we are to the mailman every morning, the post box on every corner, we take for granted one of the great privileges

of our time—the U. S. Post Office.

Hampered today by extra war time demands, shortages of men and equipment, good citizenship and good sense demand extra cooperation on our part. Mail early and often. Tie your letters, faced up, to save time in handling. Avoid the day-end peak, and try to meet train schedules . . . The originators of Metered Mail, largest manufacturer of postage meters in the world, Pitney-Bowes is now engaged in war production. But all our experience in mailing and expediting mail is at your service. Call any of our offices.



Pitney-Bowes POSTAGE METER CO.



Branches in principal cities. Cf. phone directory. In Canada: Canadian Postage Meters, Ltd.

1454 Pacific St., Stamford, Conn.



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share in 1940 to \$10.43 in 1941, but its dividends went up only \$1.00 a share. Last year when earnings dropped back to \$5.39, it was able to cover the \$4.00 dividend without any trouble.

Bethlehem Steel followed much the same policy. In 1941, it paid out \$6.00 even though earnings were running \$9.35 a share. In 1942, profits shrank to \$6.32, but the company was still able to keep its \$6.00 rate.

● **Hedge Against Expansion**—Not all companies were so well protected, however. A few even had to cut dividends in spite of rising earnings so they would have enough working capital to handle their expanding business. Particularly hard hit was du Pont, famous as a blue-chip investment and a big income producer. Squeezed from two directions, du Pont's profit dropped from \$7.49 a share in 1941 to \$5.07 last year. Dividends went down from \$7.00 to \$4.25. Part of the drop resulted from slimmer profit margins and rising costs on the company's business in chemical products, but du Pont also took a big cut in the return on its holdings of General Motors stock. Du Pont owns 10,000,000 shares of G. M., almost a share-for-share offset against its own 11,122,512 shares of common. When G. M. cut its dividend from \$3.75 to \$2, earnings per share for du Pont immediately showed the difference.

In some respects, the tabular comparison of earnings and dividends makes the situation look worse than it really is. For one thing, it takes no account of the fact that many companies are strengthening the equity of their common by retiring senior obligations or by building up surplus. U. S. Steel cut its long-term debt by \$41,400,000 during the year. Most of the railroads have been bolstering their debt structures by retiring early maturities and obligations that carry a high interest rate.

● **Heavy Reserves**—Many companies have also set up heavy reserves for postwar readjustment and conversion. Although these reduce present income and dividends, they will help protect the common stock from further cuts in the postwar period.

SEC IN THE WRINGER

Lean days lie ahead of the Securities and Exchange Commission if the House Appropriations Committee gets its way. In reviewing the federal budget for fiscal 1944, the committee knocked an even \$750,000 out of the appropriation recommended for SEC. This brings the total allotment down to \$4,048,000, which is \$862,000 less than the commission got for fiscal 1943.

The new budget suggested that SEC's "work toward preventing excessive use of credit to finance speculation in securities" should continue at "somewhat below" the present level.

THE TRADING POST

Letter

from William B. Cist of Mountain
Top, N. J.

The following expresses a point of view which I believe should be considered by any official for business policy. Because I have never seen any public expression of it I bring it to your attention.

As I read the news, evidence accumulates that there is a political intent to hold business responsible for full postwar employment.

That is not surprising, for today's politicians and today's employment are both supported by the lavish expenditure of public credit. With the exhaustion of that credit, the current version of the more abundant life will therefore collapse, and its political sponsors will find themselves politically bankrupt unless they can find a political slogan for their economic mistakes.

Therefore it is almost unbelievable that industry should willingly take over the task of underwriting the political promises of its enemies by guaranteeing full postwar employment and a more abundant life at a time when industry must know that the undertaking is almost impossible of execution, and that it is almost wholly without the powers necessary for carrying it out.

For after the war, industry will be left with a badly unbalanced productive plant, a thoroughly disrupted market organization, an appalling load of debt, an almost wholly discredited credit system, a grossly distorted price and wage structure, and a set of employees who have been taught that they are entitled to the wages of inflation, and that they must fight to retain these "social wages."

Now it is almost axiomatic that, in the absence of compulsion or inflation, full employment must depend on the willingness of people to work for wages, and to sell for prices that other people can and will pay. This will require the voluntary re-creation of a far different price structure, and a far different wage structure, than those which have arisen through the exigencies of war, the class favoritism of the New Deal government, and the grotesque credit inflation now going on.

Furthermore, unintelligent and unfair taxation can throttle full employment as easily as a distorted price and wage structure. The wise manipulation of credit, money, and the interest rate can destroy confidence, cause deflation, create hoarding, overtax business, etc., in an almost equally disastrous manner. Tariffs, trade policies, and dealings in international exchange and credit can again aid or hamper business activity. One of these things are within the present capacity of industry to regulate. Without the power to regulate them, or to free them from unwise regulation, it is simply foolhardy for industry to guarantee full employment at any time.

But fundamentally, full employment in a political democracy depends upon acceptance by the people of those terms of employment and exchange which are determined by the market; and acceptance of those wages and prices must depend upon belief in their substantial fairness to all

concerned. Without such belief in the basic fairness of the method whereby tasks are assigned and rewards are apportioned, there never will be that cooperative willingness to work for the market wage, and to sell for the market price, upon which full employment must depend in the absence of inflation or compulsion.

It is this consent by the people to be governed by the appraisals of the market, which has been undermined by the teachings of Communists and by the similar teachings of the New Deal. For people who are encouraged to consider themselves the exploited and underprivileged victims of an unfair economic system will not consent to be bound by those market appraisals through which the will of that system is expressed. They will seek rather to redress their wrongs by political compulsions, by collective violence, and by restrictive monopolies which endlessly breed countervailing restrictions.

When people, so incited, have achieved a level of inflationary wages and prices higher than a balanced economic structure can support, it is futile to talk of full employment until they have become willing to accept lower prices and wages either through widespread insolvency and prolonged personal want, or through agreement as to what fair prices and fair wages are and how these can be determined.

Therefore, it seems that industry must set itself to discover the meaning of "equity" in economic life. The obligation then lies to discover through what institutional changes such "equity" can be increasingly expressed. The obligation then lies further upon industry to gain such public acceptance of and loyalty to these institutions so that citizenship in the industrial republic of America shall be a mark of self-respecting independence, rather than an admission of exploited, underprivileged inferiority or of childish dependence on paternalistic government support.

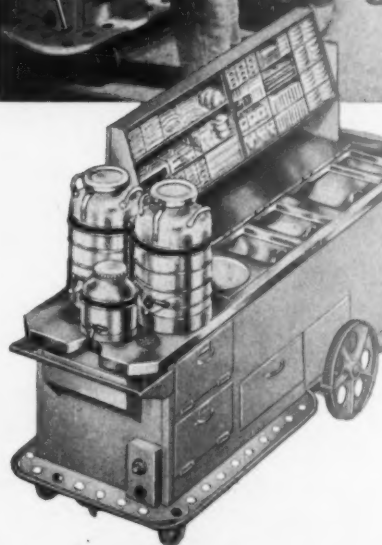
For the balance, it must be made very clear that responsibility for the consequences of inflation, for the distortion of economic factors, and for the perversion of human factors must lie with those who have wrought these mischiefs and who have seized, and continue to hold, the powers necessary for their correction.

Do You Mean Diesel Engines?

A manufacturer of war products recently received from an Army procurement officer a telegram about 500 words long. Evidently it went to hundreds of other manufacturers because it directed all contractors to place promptly their orders for certain component parts of the Army equipment they are producing. The telegram listed the items covered by the order. Here is one of them:

"DIESEL ENGINES. DIESEL ENGINES, 0-50 HP.; DIESEL ENGINES, 50-150 HP.; DIESEL ENGINES, 150-350 HP.; DIESEL ENGINES, OVER 350 HP.; DIESEL ENGINES ALL SIZES."

Now you know why you can't send birthday telegrams any more! W.C.



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Bringing food to the worker is a step-saving convenience that means greater relaxation . . . even when lunch periods are shortened. PIX PORTABLE CANTEN was designed for busy war plants where every minute and every foot of space counts. Rolls anywhere . . . brings welcome refreshment to the men on the job . . . solves the lunch-time bottleneck that slows up war production.

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* For War Industries *

THE TREND

WHERE WE STAND ON SHIPPING

Winston Churchill's frank words to Parliament last week on shipping made officially available for the first time certain basic facts which, coupled with other public data, now permit the drawing of a shipping balance sheet.

The cargo-carrying capacity of this nation and Britain at the beginning of 1942 was around 40,000,000 deadweight tons. We know that about 1,750,000 tons were added to Allied fleets in the last six months when shipbuilding totaled 6,750,000 tons and sinkings were roughly 5,000,000 tons. Since the first half of 1942 marked heavy Japanese inroads on our cargo capacity, as well as the bulk of U-boat destruction off our East Coast, it is reasonable to figure that total 1942 losses just about offset the more than 10,000,000 deadweight tons built here, in Canada, and in Britain.

So, we start 1943 with, again, about 40,000,000 tons. What are our prospects?

• **On production**, we are set to build over 18,000,000 tons this year, and other Allied contributions will surely carry the total over 20,000,000 tons. As to sinkings, Mr. Churchill remarked, significantly: "Losses of the last two months are the lowest sustained for over a year." More, our destruction of submarines is accelerating; not only was their January-October death rate the highest of the war till then, but we bettered that by more than 50% during the November-January period. And, we are only now beginning to build protective escort vessels in quantity and to plaster such U-boat bases as Lorient with thousands of tons of bombs weekly.

Barring some sudden new technical or tactical change in undersea warfare, therefore, the broad trend for ship sinkings is as surely downward as that for launchings is up—whatever the month-to-month fluctuations. Subtracting the probable range of sinkings from expected total buildups, Allied cargo fleets should be enlarged by 10,000,000 to 15,000,000 deadweight tons this year—a gain of 25% to 40% over the tonnage we now have. Hitler's recent orders for all-out U-boat warfare represent not so much a last bid for victory as a last bid to stave off defeat.

Yet, the relative brightness of the sinking-building score does not mean that the shipping bottleneck will be completely broken. It is unlikely, in the words of Rear Admiral Emory S. Land, Chairman of the U. S. Maritime Commission, that "we shall ever have enough ships for this war."

• **To understand why this is so**, sample the arithmetic of requirements. One frequently quoted estimate is that it takes 17 deadweight tons of shipping to transport one soldier with full equipment 3,000 miles overseas and 3.4 tons additional, in constant operation, to keep him supplied. The more troops sent abroad, the more ships needed simply to supply their needs there. Thus, since after a year of moving troops overseas we have no more

ships than a year ago, we have fewer of them to move troops now.

To see how we stand, let's consider how many troops we could transport to Britain in the ships that we expect to add in 1943, proceeding on the two critical assumptions that (1) existing shipping is committed to supply duties and that (2) the new ships are not diverted to carrying lend-lease goods or to despatching American soldiers longer distances. The answer, on the basis of all the factors involved, comes out to 2,000,000 troops, and a similar calculation points to shipment of perhaps twice as many in 1944. Certainly, with over 4,000,000 soldiers in this country now, we would like to do more faster.

• **But, of course, our example is too simple.** Some existing ships may be available for current troop convoy; on the other hand, we shall not be sending soldiers only to Britain or using ships only for troop transport and supply.

And that brings us to the third key factor in a shipping balance sheet—ship utilization. Fewer men and materials can be sent on the long voyages to the South Pacific and the Middle East than on the shorter haul to Britain. Convoys to North Africa lose efficiency through poor harbor facilities. These are things easy to see. But we must also balance the value of sending troops and munitions to a western front against that of shipping munitions via lend-lease over a longer journey. And if lend-lease is cheaper in ship efficiency, is it cheaper in terms of military strategy and high policy?

• **Mr. Churchill threw no light on how we are going to answer such questions**, and some answers are military secrets. Therefore, we cannot know precisely what our ship budget is. What we can discern is that the ship bottleneck is being widened, but that, nonetheless, relative to our increasing arms production and our increasing arms needs on the fronts, it will remain a bottleneck for some time to come.

By the end of 1943, we shall probably have 25% more ships than Britain, according to Admiral Land. Projecting building and sinking rates to the end of 1944, we find that we are then likely to have on the order of 80% more—perhaps 45,000,000 deadweight tons, as against 25,000,000 for the British—and against a total of 70,000,000 deadweight tons of ocean-going vessels in the entire prewar world.

This suggests a final question: Will that be too many ships for peacetime? Consider this, not from the narrow viewpoint of what we can make out of a wartime investment, but from the broader standpoint of whether and how we can contribute to a necessary rebirth of world trade. The answer to this one will epitomize our international position in the postwar world.

The Editors of Business Week

Business Week • February 20, 1943

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